Public Utilities

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For All Industrial Progress Thank Individuals

There are no government counterparts to Pasteur, Faraday, Watt, Edison, or Ford

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FIFTY years ago, on the evening of March 20, 1886, in the quiet New England village of Great Barrington, a frail and visionary young man completed his first experiments in the practical application of a new type of electricity. Working only with the crude materials of his day, opposed by all the combined weight of accepted scientific opinion, and beginning with home-made apparatus fashioned partly out of tin-type plates borrowed from the local photographer, William Stanley had successfully produced a device which was destined not only to determine the future course of electrical development but was also to revolutionize the organization of all industry as well.

From these humble beginnings have spread the far-reaching networks of power lines which made possible the electric industry as we know it today and there began the widespread electrification of manufacture which has contributed so largely to the character of present-day America and to its preëminence among the industrial nations of the world.

It has truly been said that Stanley's device was well named a "transformer" in that it not only made possible the transformation of electricity from low voltage to high and vice versa, but

it also insured the transformation of much of the mode of life and political thought as well. For, unbeknown to its inventor, there were also latent in this discovery some very practical considerations which were destined to lead to the subordination of scientific accomplishment to financial expediency and political opportunism.

SPECTACULAR as had been the immediate results and important as were the effects of Edison's development of the electric lamp some seven years before, the physical limitations of direct current paralleled those of the prevailing factory era and the term "central station," which still persists as an anachronism, was well chosen as typifying existing conditions and future possibilities. At the same time, viewed in retrospect, this seems to have had some offsetting advantages. The political complexities of the electric light and power industry have increased in direct proportion to its technical progress. If the isolated "central station" had still persisted, the large-scale combination of companies, whose development was inevitable with improved engineering, would never have been possible; the world would never have heard the phrase "power trust" and many politicians would have had to turn to other things for some of their most prized "issues."

With Stanley's discoveries, so ably seconded and carried forward by Westinghouse, another period in the development of the electric industry rapidly took shape. It ceased, in large measure, to be primarily a lighting service and began to be a power business. With the assurance that energy could be transmitted over considerable distances without insuperable loss, the development of water power became economically possible and with it began the expansion of power systems and the supply of electricity over wide areas.

TODAY, what was at first a laboratory experiment, undertaken with great doubt and trepidation, has become one of the country's outstanding industries. Beginning its service to the public in a limited area of the downtown business section of one city, the network of electric lines has been extended until service is available to everybody that wants it in practically every community. It has spread out into rural regions until thousands of little villages have it at hand and it is in use on three quarters of a million farms. Even twenty years ago, thousands of these small places had current which was turned on only part of the day and, in some cases, only on certain days a week. Now, all of these have continuous power of the same quality and reliability as the large cities. And the greatest achievement of all is the one most rarely mentioned; namely, that service has become so regular as to be taken for granted to the extent that its real value is inadequately appreciated.

All this development and expansion has been made in this country through private intiative. From the very start, private capital and management have assumed all the risks of the pioneer in the research, experimentation, and the building up of the business. This industry has asked no favors of government subsidy. It has stood on its own feet as a business venture which must

The Secondary Rôle of Government

"GOVERNMENT *can imitate but cannot originate. With its huge financial resources arising out of its power to tax, government can follow along where others have shown the way and can, in point of size and cost, construct monuments (such as Grand Coulee and the Passamaquoddy) to its spending power but it does not, and probably never will, perfect a new device or promote a new discovery."*

pay its own way as it goes along. Far from receiving encouragement, it has had to work against the increasing handicap of mounting taxation, against the rivalry of other forms of energy for its markets and against the competition of tax-exempt governmentally operated plants.

THAT the public utility has gone so far in supplying an adequate, dependable, and standardized product is a high tribute to the natural resources of the country, to the courage and resourcefulness of the pioneers of the industry, and to the fact that Federal government let it alone during its critical early years. For it is as discouraging as it is true that the narcotic effect of government extends far beyond its own immediate operations and benumbs private initiative as well. Over-regulation eventually breeds stagnation and when everybody "plays safe" the day of the pioneer is over and the accomplishments of the inventor will stay forever within the walls of his workshop.

No more striking example of this can be found than in a comparison of the twenty-seven separate political subdivisions of London, England, with the twenty-seven cities which surround Newark, New Jersey, and are supplied with electricity by the organization which I have the honor of serving.

As late as 1932, in the London area, there were twenty-three different electrical enterprises, of which fourteen were governmentally operated. There were fifteen different voltages of direct current and fourteen different voltages of alterating current for lighting and small power consumers; or twenty-nine kinds of electricity in all. Conditions were so complicated that, in many instances, a family moving even across the street had to discard all of its electrical appliances and begin over again with a new set. It is small wonder that the use of electricity made little progress. On the other hand, the New Jersey cities have had for many years a standardized electric supply of two voltages of alternating current and every family may move from any point to any other within the area which we supply with the assurance that everything that it owns will work just as well in the new home.

It is a matter of simple historical record that "progress," as we accept the term in America, has come about entirely through the urge for discovery and invention, with the incentive of personal gain in fame or fortune that these things would bring. This urge rarely bears fruit in the stale atmosphere of bureaucracy.

Industrial progress has been due to individuals, not to governments. One looks in vain for the name of any government employee as the originator, inventor, or developer of any of the fundamental discoveries which have so radically changed the course of history during the past century and a half. There are no government counterparts to Pasteur, Faraday, Watt, Edison, or Ford.

While, as in the case of the enterprises of the well-managed cities of some of the European countries, government may administer capably, history has repeatedly shown that it can rarely pioneer. Where private enterprise can, and does, afford to assume the risks of possible disappointment, the inherent necessity for government bureaus to take no chances and avoid the inevitable criticism of "useless waste" discourages their experimentation with technical things.

Government can imitate but cannot originate. With its huge financial resources arising out of its power to tax, government can follow along where others have shown the way and can, in point of size and cost, construct monuments (such as Grand Coulee and the Passamaquoddy) to its spending power but it does not, and probably never will, perfect a new device or promote a new discovery.

Few persons realized this more clearly than Edison, who, in an interview with Samuel Crowther, published in an article in the *Saturday Evening Post* of January 5, 1929, said:

> There is far more danger in public monopoly than there is in private monopoly, for when the government goes into business it can always shift its losses to the taxpayers. If it goes into the power business it can pretend to sell cheap power and then cover up its losses.
>
> The government never really goes into business, for it never makes ends meet. And that is the first requisite of business. It just mixes a little business with a lot of politics and no one ever gets a chance to find out what is actually going on. . . .
>
> Any large extension of the government into business affairs—no matter what the pretense and no matter how the extension is labeled—will be bound to promote waste and put a curb on our prosperity and progress. Somehow, and probably it is in the very nature of things, a government office is below the level of a private office.

Many persons have called attention to the extent of government operation of all kinds of things in foreign countries. Almost every sort of enterprise, from the rubber plantations of Java to the municipal rathskeller of Frankfort, has been run by government at some time or other. In some places it has been truly said that government looks after every phase of its citizens' lives from the cradle to the grave. Excluding the United States, more than half the railroad mileage of the world is government owned. Every country of major importance, with the exception of this country, China, Venezuela, and Ecuador, operates its own telegraphs, and in the case of telephones the government monopoly is almost as great.

All that this proves, however, is the existence of conditions which we may be thankful do not—as yet—exist over here. Transportation and com-

munication are two of the vital elements of war and it is little wonder that apprehensive nations should long ago have decided that they could not run the risk of leaving these indispensable functions in private hands where they could not instantly be manipulated in case of an emergency. We came to the same conclusion as to our own railroads during the last war and one of its most spectacular results was a deficit of $1,650,000,000.

OTHER friends of government ownership point out that while results in Europe may perhaps in some cases be inferior to those in the United States from the standpoint of size, service, and extent of use, they are often superior to similar private enterprises in the same neighborhood and argue that the same thing would of necessity prevail here.

It is beside the point to make detailed comparisons between the publicly owned utility systems of Europe and the record of the industry under private initiative in the United States. Conditions are radically different. It is only necessary to call attention to the different spirit with which men regard political service—especially the minor positions—in the older European countries where public office is imbued with a high *esprit de corps,* where public officials are largely "career men" and not, as in this country, the casual followers of the "spoils system" and where the general level of the detail of local government is above that found in all but a few places in the United States.

"An autocratic government, with its high degree of centralization, with its continuity of policy and with its highly trained bureaucrats, is not comparable to the government of the United States," says Dr. Splawn in his book on government ownership.[1]

He also says:

> The operations of the Imperial Government of Germany in conducting a business would be more comparable to the operations of the Standard Oil Company, the U. S. Steel Corporation, or the Ford Motor Company. . . . In the case of the autocratic government, as in the case of the private corporation there is definiteness of aim, responsible direction, sustained effort toward reaching a given objective, strong incentive to prevent wastes and to create the desired services at the least cost. . . . In a democracy or a representative government, no such efficiency in operating a business by the government can be reasonably expected. . . . A representative government was not conceived as an organization for engaging in business enterprise.

ONE obvious danger in this country is the building up of powerful political machines upon the voting power of the public utility employees and upon the subsidies that below-cost rates can give to favored classes of voters. This is not an alarmist's prediction. It would only be history re-

[1] Government Ownership and Operation of Railroads (McMillan & Co.), by Dr. Walter M. W. Splawn, pp. 304, 305.

¶ "THAT *the public utility has gone so far in supplying an adequate, dependable, and standardized product is a high tribute to the natural resources of the country, to the courage and resourcefulness of the pioneers of the industry, and to the fact that Federal government let it alone during its critical early years."*

peating itself. What has happened once can happen again and what actually did happen may be seen from the following description of a now forgotten bit of history, as told by that stout defender of American conditions, James Bryce:

> The centre of this power was the Gas Trust (the municipal gas plant of Philadelphia) administered by trustees, one of whom, by his superior activity and intelligence, secured the command of the whole party machinery and reached the high position of recognized boss of Philadelphia. This gentleman, Mr. James M'Manes, having gained influence among the humbler voters, was appointed one of the gas trustees and soon managed to bring the whole of that department under his control. Appointing his friends and dependents to the chief places under the trust and requiring them to fill the ranks of its ordinary workmen with persons on whom they could rely, the boss acquired the control of a considerable number of votes and of a large annual revenue. He and his confederates then purchased a controlling interest in the principal horse-car company of the city, whereby they became masters of a large number of additional voters. . . . Mr. M'Manes held the payrolls under lock and key, so that no one could know how many employees there were, and it was open to him to increase their number to any extent. . . . Regarding each municipal department chiefly as a means of accumulating subservient electors, it was always tempted to "create new voting stock," (to use the technical expression) *i. e.*, to appoint additional employees . . . and there was of course a vast deal of speculation in nearly all the departments. . . . In the suit subsequently instituted against the gas trustees, it was shown that in six years the gas trust had, in cash losses, illegal transactions and manufacturing losses due to corrupt management, involved the city in an expense of three and one-half million dollars (Report of the Committee of One Hundred, p. II). The debt of the city swelled rapidly. In 1860 it stood at about $20,000,000. In 1881 it had reached $70,000,000. Taxation rose in proportion, until in 1881 it amounted to between one fourth and one third of the net income from the property on which it was assessed, although that property was rated at nearly its full value.[2]

The more serious, as well as the more insidious, result of the unreasonable interference of government with business lies in its discouragement of business itself. When every matter of petty routine must be passed upon by a distant government bureau; when all aspects of conduct become encased in rigid strait-jackets, men begin to lose heart. Invention, improvement, and expansion have come through devotion, enterprise, and the ambition to make one's way in the world and when these are discouraged, the capable people seek other fields for their careers and the business stagnates. Promising young men go elsewhere; the ambitious take up other lines of work where there is more recognition and less "grief"; only the timid, the apathetic, and the mediocre remain. With all the opportunities still on the horizon of technology and with the abundant possibility of further progress still latent in the science of electricity, if this should happen, the American people would be losers indeed.

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[2] Bryce "The American Commonwealth," Vol. II, pp. 404–411.

The Utilities Are Probably Wondering Too

"Governments are wondering what should be done about utilities. While it is possible to enforce on public service corporations a legalistic concept of a 'reasonable rate,' it is impossible to undertake wholesale regulation and supervision of internal management, corporate organization, stock manipulation, and profit taking, in order to bring rates down to the levels desirable from a sociological viewpoint."

—J. P. Pope,
U. S. Senator from Idaho.

The Proposals to Curb the Supreme Court

An old question bobs up once more

Concrete demands that the Federal judicial powers be limited have often been made since the first strong nationalistic opinions of Chief Justice Marshall began to be rendered. A review of former assaults on the court for alleged usurpation of power, and the outcome of such attacks, are worth recalling, in the opinion of the author, in view of present criticism which has arisen in some quarters because of the court's declaration of the unconstitutionality of certain laws passed by Congress.

By DUDLEY CAMMETT LUNT

Nothing *in the court's history is more striking than the fact that, while its significant and necessary place in the Federal form of government has always been recognized by thoughtful and patriotic men, nevertheless, no branch of the government and no institution under the Constitution has sustained more continuous attack or reached its present position after more vigorous opposition.*

—Charles Warren.
The Supreme Court in United States History.

There is a deal more aid and comfort to those interested in public utilities in the TVA decision than meets the eye. To those who took the trouble to read Mr. Justice McReynolds, bluff and bold dissent, there has been portrayed in the gentleman's usual inimitable fashion the issue which the court must ultimately face and decide. To those who took the trouble to read the opinion of Mr. Justice Brandeis there has been illumined the fact that while the score of the decision was eight to one, this fails to indicate the true line-up of the court, for the gist of his view, in which three other of the Justices concurred, was that the dissentient stockholders of the power company had no standing before the court. Finally those who took the trouble to read the opinion of the Chief Justice have realized how restricted was the scope of both opinion and decision.

The gist of the matter is this: In so far as the merits were discussed four judges agreed in applying old and well-established law to a situation the basis of which had been created when new deals were still something one ac-

complished by the manipulation of a deck of cards.

But there is still more. The lone dissent points a warning finger to the ultimate issue. And the question is—what will be the ambit of the power of the court to review Federal legislation when that issue is unequivocably presented? In other words there remains to be assayed the effect of this decision upon the current attempts to curb or destroy that ancient prerogative of the court. It is in this view of the situation that what the headlines have termed the "TVA victory" takes on a decided Phyrric aspect.

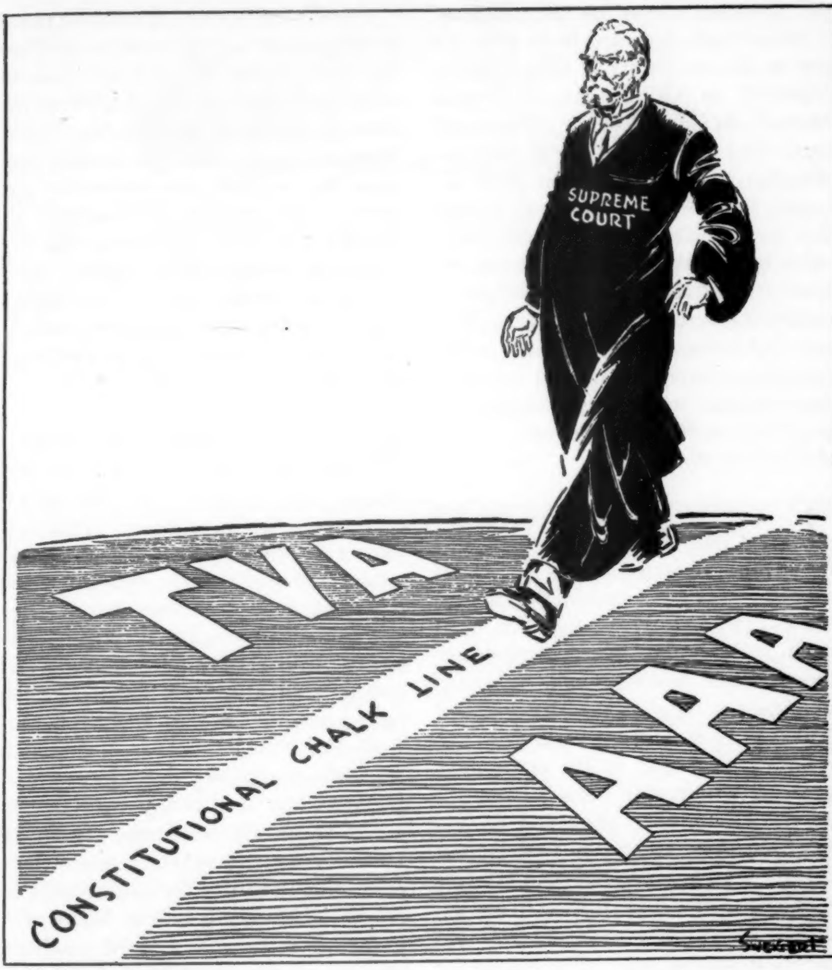
THE court and its power to impose an absolute negative on legislation are perennially the object of attack by this or that faction adversely affected at the given moment by the exercise of that power. Occasionally such an attack acquires political significance and even assumes the momentum of a so-called movement. There is every indication that we are now passing through the final stage of such a phenomenon.

The current furore began to assume importance with the five to four decision last May invalidating railroad pensions. Theretofore the mutterings of discontent were, apart from their perennial character, only ominous forebodings. Three weeks later came the unanimous decisions throwing out the farm mortgage legislation and the NRA. Then to the clamor of labor was added the voices of those who desired an absolute stay on the collection of farm mortgages. Those were the days of the horse and buggy business.

THE attack was more than vocal. Then it was that Senator Norris proposed that the Constitution be amended to require the concurrence of two thirds of the justices before a Federal statute could be declared invalid. This ante has been raised in the flock of bills and resolutions evoked by the six to three decision on the AAA. For when you touch the pocketbook you have exquisite pain. The various schemes, all of which appear to be confined to Federal legislation, range from proposals to raise the requisite majority and thus permit a minority to speak for the court, to an absolute denial of the power under any circumstances.

Could the Congress effectuate its purpose in curbing the court? Here you have two problems. One concerns the "judicial power" and the other the "appellate jurisdiction" of the court. The proposals to raise the majority run afoul of the first problem and are open to grave constitutional doubt short of an amendment to the Constitution. This for the simple reason that the Constitution having vested the "judicial power" in the Supreme Court, it does not lie in the mouth of Congress to tell the members of that body how they shall make their decisions. But an insistence upon the constitutional inviolability of the "judicial power" may be shelved as an empty abstraction in view of the other problem.

THIS problem is posed in the provision that "In all the other cases before mentioned (*i. e.* all those to which the judicial power extends except those few specifically ascribed to the original jurisdiction of the court) the Supreme Court shall have appellate jurisdiction, both as to law and



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fact, with such exceptions and under such regulations as the Congress shall make."

As an original proposition the scope of the power of Congress under this provision might be made the subject of an extensive debate. But such a disquisition would lead into the realms of theory and abstraction and would today be a trespass upon the reader's patience. For the matter is settled—settled for all time by nearly a century and a half of practice and experience, which is to say of legislation and decision. On this score let there be no mistake. The power of Congress in

the premises verges on the absolute.

So to state the case is to give the gist of the comments of Chief Justice Marshall in Durousseau *v.* United States [1] decided in 1810. The argument runs in this wise. It is the Constitution, not Congress, that gives appellate powers to the Supreme Court. But nevertheless the Congress may carve out "exceptions" and it may impose "regulations." And when it passed the first Judiciary Act in 1789, said John Marshall, that being an affirmative description of this appellate jurisdiction, there was implied the negation of that jurisdiction outside the bounds of that act.

THE same result had been reached by Chief Justice Ellsworth sixteen years previous. It has since been echoed in cases decided in the time of Taney, Chase, Waite, Fuller, and Taft. And the many alterations, amendments, additions, and the later enactments supplanting the original Judiciary Act and regulating the appellate jurisdiction of the court defy analysis within any reasonable compass. Thus does Congress hold the key to this appellate jurisdiction. Clearly what Congress gives, Congress may take away, and if the court is deprived of its jurisdiction to hear the cause, it cannot pass upon legislation challenged therein.

This poses the further question—what is the likelihood of action by Congress which would seriously impair this prerogative? The answer is revealed in the history of past attempts by Congress to curb the court. Here the record supplies some interesting analogies to the current furore.

The first attack on the judicial power was successful. It came to pass as the result of the first and only case in which an individual called a sovereign state to account before the bar of the Supreme Court. Here the assault was upon the original jurisdiction of the court. The decision in Chisholm *v.* Georgia [2] in 1793 sustaining this jurisdiction immediately evoked proposals to amend the Constitution. The result was the Eleventh Amendment which excludes such a case from the judicial power.

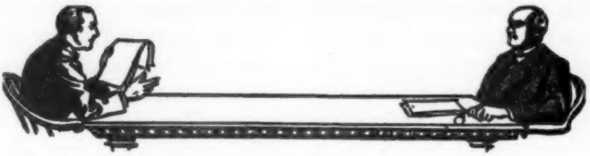
SHORT upon the heels of this episode came the controversy over the Judiciary Act of 1801. This was largely political in its nature. This act passed in the dying days of John Adams' administration while embodying much needed reforms in the judicial system, also created a considerable number of judgeships. These were promptly filled with Federalists and hence the old phrase "the Midnight Judges." The act was repealed by the Republican majority in the next Congress, and by further legislation altering its terms, the court was prevented from sitting for nearly a year, thus postponing a test of the validity of the repeal. Ultimately it was held valid in Stuart *v.* Laird,[3] a decision which was as pleasing to the Jacobins of 1803 as has been the recent TVA decision to the New Dealers of 1936.

It was the steady production of the strong nationalistic opinions of John Marshall which produced the first concrete proposals to curb the court. In the 1820's there came a regular crop of assaults. Behind the familiar de-

[1] 6 Cranch, 307, 3 L. ed. 232.

[2] 2 Dall. 419, 1 L. ed. 440.

[3] 1 Cranch, 299, 2 L. ed. 115.



Effect of Favorable Decision on Critics

"WHEN *those who use tall language about the 'usurpation of power' by the court are suddenly presented with a decision which is right up their alley, it is, as the French say, to laugh. There have been several occasions in the past when the most clamorous of diatribes have been silenced by a decision to their liking, or the entire assault smothered and forgotten in the rise of public interest in, and the public espousal of, some unrelated decision of the court."*

sire to set up a minority to speak for the court, the real hostility was to the court's decisions which had held state legislation invalid. With respect to Federal legislation the complaint was that the court had *not* held it unconstitutional. This is in direct contrast to the present upheaval in which little if anything is to be heard about the review of state laws and the court is cried down for thwarting Congress.

THESE attacks reached their peak in 1831 when a bill to repeal the famous twenty-fifth section of the Judiciary Act, which provided the means for the review of state laws, was reported favorably by the Judiciary Committee of the House. It was defeated and the significant aspect of its defeat is the fact that all but a handful of the votes cast in favor of the repeal were those of members from Southern and Western states. Thereafter the attacks were further complicated by the court's decisions in the Cherokee Cases[4] and the well-known controversy over nullification. After Andrew Jackson's proclamation they dwindled away and all was comparatively quiet on this front for two decades.

The next series of attacks occurred in the fifties. This time slavery was the moving cause. But the shoe was on the other foot. The complaint was the same—hostility to the twenty-fifth section but it was centered in the Northern states and fanned by abolitionist opposition to the fugitive slave law. Again the assaults produced no results in so far as the power of the court was concerned.

THE court next ran afoul of the radical Republicans of the reconstruction period. *Ex parte* Milligan[5] denying to the President the power to create military tribunals where the civil courts were still open, set off the

[4] (1831) 5 Pet. 1, 8 L. ed. 25.
[5] (1866) 4 Wall. 2, 18 L. ed. 281.

fireworks. The usual bills began to appear in the legislative hopper and a two-thirds concurrence measure passed in the House but was lost in the Senate. This assault is significant because in its course Congress succeeded in throttling the court's power to review its legislation in one instance.

The calibre of that legislation is revealed by one of the titles—An act to provide for the more efficient government of the rebel states. As is well known the iron hand of the military engineered the vital functioning of this type of legislation. There was grave doubt as to its constitutionality. And in the spring of 1869 there was a case pending in the Supreme Court in which that legislation would have to satisfy the constitutional scruples of the judges. This was *Re* McCardle.[6]

Down in Mississippi McCardle had been arrested and held for trial before a military tribunal constituted pursuant to the act in question. He was charged with having published "incendiary and libelous" articles. An attempt was made in the lower Federal court in Mississippi to procure his release on a writ of *habeas corpus*. This failed whereupon an appeal was taken to the Supreme Court under an act which had been passed a couple of years previous. After McCardle's Case had been argued on the merits but before the judges had met in conference Congress passed an act repealing the act from which the court's jurisdiction to hear the appeal was derived. This repealer was passed in a stealthy manner as a rider to other legislation. President Johnson, to his credit, vetoed it. Thereupon Congress repassed the repeal over his veto.

The court refrained from joining issue in a race with Congress and had postponed their determination of the case. The absence of Chief Justice Chase who had been called from the bench to preside over the impeachment trial of President Johnson was doubtless another reason for the postponement. And shortly after the repeal of the act giving the court jurisdiction of McCardle's appeal, the court held that it was without jurisdiction and dismissed the appeal.

Six months later a similar appeal was taken in another case (*Re* Yerger)[7] under a prior act. On this appeal the court held that it did have jurisdiction on the ground that the prior act conferring the jurisdiction had not been repealed by implication by the act which had demolished McCardle's appeal. The constitutional question was not passed on, the cause having been disposed of by a stipulation between counsel before a hearing on the merits. This decision is illustrative of the practical difficulty involved in effectively destroying the court's power to review legislation. Indeed an attempt was made to shut off all appeals in cases arising in the reconstruction areas. But it never got to first base.

There have been other attacks launched against the court. The practice is a perennial form of sport. The income tax decisions in the nineties,[8] *Re* Debs,[9] and Lochner *v.* New York,[10] the decision which invalidated

[6] 7 Wall. 506, 19 L. ed. 264.

[7] (1869) 8 Wall. 85, 19 L. ed. 332.

[8] (1895) 157 U. S. 429, 39 L. ed. 759; 158 U. S. 601, 39 L. ed. 1108.

[9] (1895) 158 U. S. 564, 39 L. ed. 1092.

[10] (1905) 198 U. S. 45, 49 L. ed. 937.

the 10-hour law for bakers were the occasions for familiar instances. But the outcome is always the same. The results are practically nil. The reasons are not difficult to discern. They are operating today in the current controversy which will doubtless result in as little encroachment upon the judicial power as heretofore.

THE basic reason arises from an obvious fact which the proponents of the particular attack seem never to consider. The springboard of the court's action is always a controversy—a real controversy and there are always two sides to a dispute. Thus it is no surprise to discover that the sections, interests, blocs, factions, or classes adversely affected by the particular decision are to be found on one side of the fence in the attack today and in the next assault will be found on the other side of the fence. It all depends upon whose toes are being trod upon.

Witness the attacks prior to the Civil War. The opposition revealed clearly defined sectional lines. In the case of nullification it was the South, whereas in the anti-slavery agitation, it was the North. Today the geographical differentiation, while it is still to be seen in an East and West fashion, is eclipsed in many instances by the emergence of groups whose economic interest rather than their sectional attachment is their binding tie.

AGAIN the effect of a decision which affronts a vociferous element may and usually does cut across party lines. It is only when the opposition has political cohesion that the assault is likely to have any effect on the power of the court. Witness the disgraceful McCardle episode. And this is in interesting contrast to the present situation.

The reign of the radical Republicans is generally regarded today with extreme disgust. Would any leader of any party in his right senses attempt to take a leaf from their book so noisome as the nauseating maneuver just prior to the decision in McCardle?[11] Certainly not one so politically astute as the leader of the present administration.

Furthermore the repeal then effectuated prevented the court's decision in but that one case. Another cropped up presenting the same constitutional issue within six months. As has been remarked the attempt of the radicals to meet the latter situation resulted in failure. The reason is illuminating. The star of radical Republicanism was then on the wane following the failure successfully to

[11] *Supra*, footnote 6.

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impeach President Johnson. Another element in the picture was the fact that about six weeks after the decision in *Re* Yerger [12] the attention of the public was diverted by the split decision in Hepburn *v.* Griswold, [13] the legal tender case.

In this latter aspect is to be seen another item of apt application today. To the public at large an important decision of the court is quite often a surprise package. When those who use tall language about the "usurpation of power" by the court are suddenly presented with a decision which is right up their alley, it is, as the French say, to laugh. There have been several occasions in the past when the most clamorous of diatri[...] have been silenced by a decision [...] their liking, or the entire assa[...] smothered and forgotten in the rise [...] public interest in, and the pub[...] espousal of, some unrelated decisi[...] of the court.

This then is the more immediate significance of the TVA decision. The sailors had a phrase for it. When a strong puff of wind comes from the opposite quarter, the ship is taken aback.

It may with confidence be asserted that this latest decision supporting a New Deal venture has broken the back of the movement, if indeed it could be dignified by the use of that term, to beard the nine lawgivers in their new den.

[12] *Supra,* footnote 7.
[13] (1870) 8 Wall. 603, 19 L. ed. 513.

Electric Bulbs Destroyed by Acts of Providence

The mortality rate among the electric light bulbs of the city of Providence, R. I., is increasing at such a rate that it is causing grave concern to Ralph W. Eaton, who, as the city's public service engineer, is the man to become gravely concerned over such matters.

In making public his annual report recently, Mr. Eaton simply presented the facts. Being a public service engineer rather than a psychologist, he made no attempt to explain why a light that sheds its glow directly upon a bench in the park should be any more preyed upon than a light that sends its rays over a street corner. But that is the situation, Mr. Eaton says.

Last Halloween was the hardest on Mr. Eaton's protegés in many years. In fact he reports that the casualties on the Halloween come pretty close to representing the difference between the 1934 and 1935 mortality rate.

The year 1934 wasn't a particularly good year for light breaking. True, there were 4,498 lamps and 1,239 globes broken but that was hardly a drop in the bucket compared to what the folks did in 1936 when they really began to warm up to their war on illumination. During 1935 there were 7,241 lamps and 1,507 globes that fell under the onslaught of the citizenry. Whether this was due to increased interest in the matter or to improved marksmanship Mr. Eaton doesn't say.

Scientific Progress in the Field of Public Service

Views of various landmarks and personalities linked with industrial discovery and inventions, as contrasted with scenes of modern developments that make possible the comforts of present-day utility service.

This is the eleventh of a series of pictorial supplements of PUBLIC UTILITIES FORTNIGHTLY. *It portrays the important part played by scientists and manufacturers in the operation of public utilities.*

ABOVE—Scene of the first natural gas well, discovered 1821.

RIGHT—A valve used on the original Fredonia line, showing also pieces of logs that were used for pipes.

The BIRTHPLACE of natural gas in America. Hither journeyed General Lafayette in 1825 to observe the "eighth wonder of the world." Asked the editor of the *Fredonia Censor,* "What village can compare with Fredonia?"

Menlo Park, N. J., (shown above—Laboratory on right) was the scene of Edison's greatest conquest. Late in the year 1877, he conceived the idea of an incandescent lamp that would burn brightly, use little current, and be independent of other lamps in the circuit.

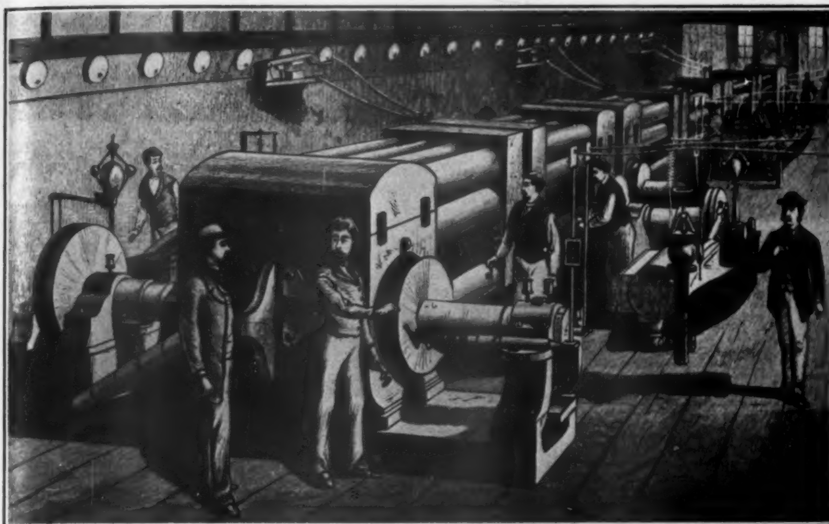
Model of Edison's first successful lamp

ABOVE—For lamp filament, Edison made over 16,000 tests, carbonizing materials in a small furnace. Using a carbonized thread, his first lamp lit up Oct. 21, 1879 —burned 40 hours.

RIGHT—Edison after 5 days' work on his phonograph.

WHEN A FOURTEEN BILLION DOLLAR INDUSTRY LITERALLY HUNG BY A THREAD

These scenes are reproduced from a Special Bulletin of the National Electric Light Association, issued September, 1929, to commemorate "Light's Golden Jubilee."



Courtesy, Consolidated Gas Co. of N. Y.

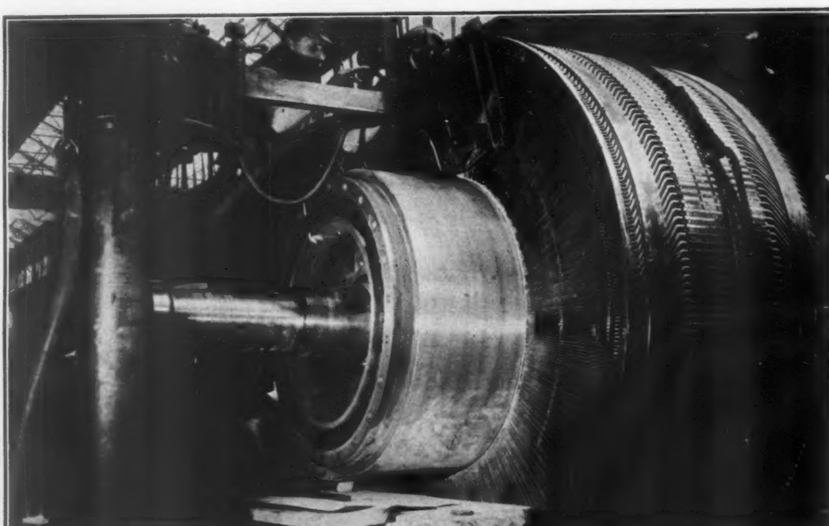
With his lamp invented, Edison soon realized that power distribution methods would have to be improved if his lamps were ever to be used by the public. He solved the problem with the central station system. Here is his Pearl Street Station, New York, opened for operations in 1882.

General Electric Co.

Here is how power is made today. This Long Lake Station of the Washington Water Power Co. gives one an idea of the different stages by which water is harnessed, power generated and sent on its way over the hills to the people.

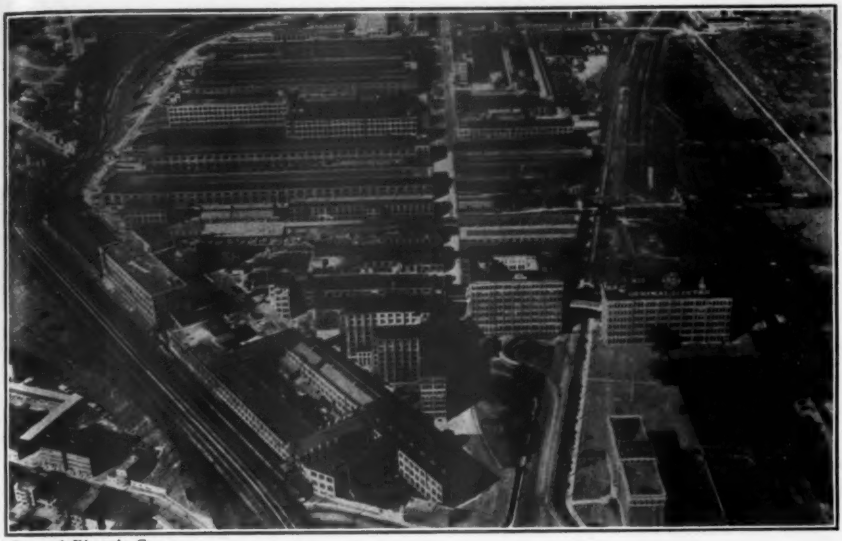
Westinghouse Electric & Manufacturing Co.

This is the Golden Jubilee year for both William Stanley's transformer and the Westinghouse Electric Co. The company's plant at East Pittsburgh is seen behind the George Westinghouse Memorial Bridge—dedicated to Stanley's friend, mentor, and employer.



Westinghouse Electric & Manufacturing Co.

And here is the sort of thing that goes on inside of the big Westinghouse plant at East Pittsburgh, pictured above. This giant commutator is destined for a steel mill generator. The machinist is undercutting mica.

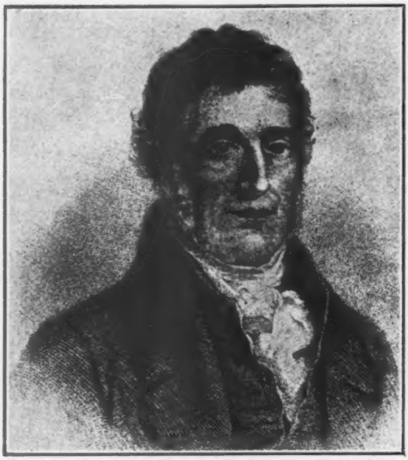


General Electric Co.

Another modern marvel in the field of electrical manufacturing is the plant of the General Electric Co. (founded 1892) at Schenectady, N. Y., which builds almost every conceivable form of apparatus for the generation, transmission, distribution, and consumption of electricity.

Electric Institute of Washington, D. C.

Some idea of the variety of appliances manufactured for the use of electricity consumers can be had from the above display. These are just every-day appliances. Specialities such as permanent wavers, X-Rayers, electric reed organs would fill a city block.



Courtesy Cons. Gas, Elec. Lt. & Pwr. Co., Baltimore

WILLIAM MURDOCH

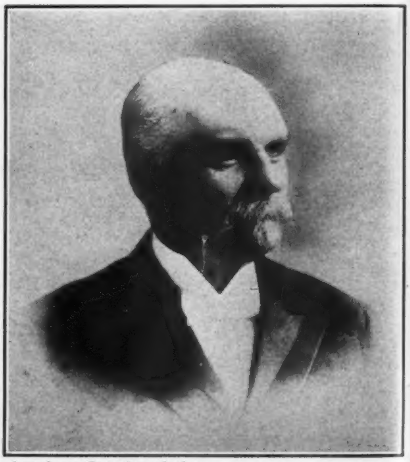
Courtesy Cons. Gas, Elec. Lt. & Pwr. Co., Baltimore

F. A. WINSOR

"There is a madman," wrote Sir Walter Scott, "proposing to light the streets of London—with what do you suppose—smoke!" The madman was a Moravian Winsor who finally convinced conservative Britains that coal gas, as developed by a Scotchman, William Murdoch, in 1792, was not only feasible but desirable. Britain still clings to gas illumination.

Library of Congress

REMBRANDT PEALE



American Gas Association

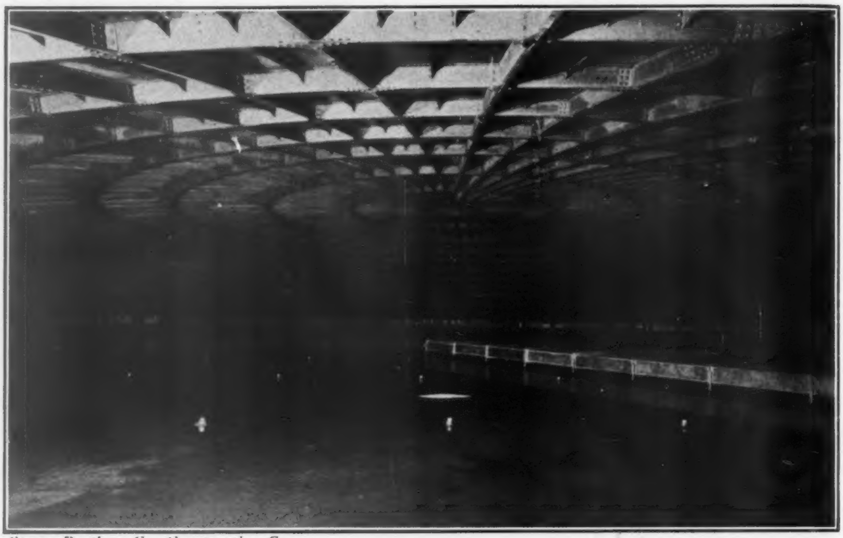
T. S. C. LOWE

To Baltimore, Md., goes the honor of being the first American city to adopt gas lighting. It was in 1817, at the instigation of Rembrandt Peale, a Pennsylvanian artist. To an American, T. S. C. Lowe, 1832–1913, goes the honor of perfecting the water-gas apparatus and coke ovens. Born in New Hampshire, he established the Lowe Observatory in the Sierra Madre Mountains, Cal., and numbered among his inventions the first artificial ice machine in the United States.

The Bartlett Hayward Co., Inc.

GAS FOR CHICAGO

Twenty million cubic feet—that is the capacity of this up-to-date gas holder that stands on the outskirts of the Windy City and points the way for passing aeronauts.



Stacey Brothers Gas Construction Co.

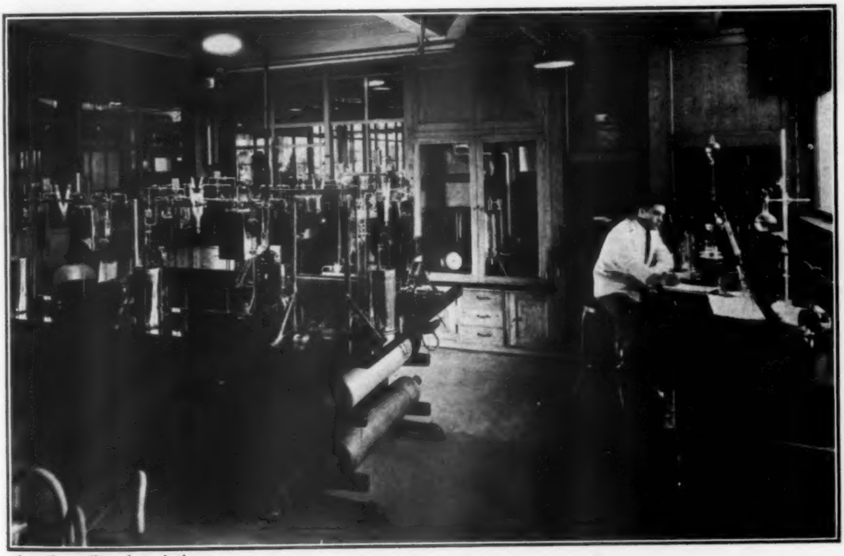
Inside of one of the world's largest dryseal gas holders, recently constructed at Syracuse, N. Y. Introduced from Germany, this piston type holder houses six million cubic feet of gas.

American Gas Association

A woman, Miss Mary E. Dillion, is head of the modern water gas plant, a miniature scale model of which is shown above—property of the Brooklyn Borough Gas Company.

American Gas Association

Scientific research for general improvements in domestic gas appliances is constantly going on in the modern testing laboratories of the American Gas Association.



American Gas Association

The heart of the American Gas Association laboratories is the chemical section where combustion products, samples from every appliance model, are critically analyzed.

Cast Iron Pipe Research Association

Philadelphia built the first municipal waterworks in America—1799. First wood, then cast iron was made into its pipes. Here is a section of the latter, still used and useful as part of the distributing system after 106 years of faithful service.

Southern California Gas Co.

A modern pipe-line installation. Over the Sierras, through swamp and desert, this line of the Southern California Gas Co. defies distance and topography in the performance of public service.

U. S. Pipe & Foundry Co.

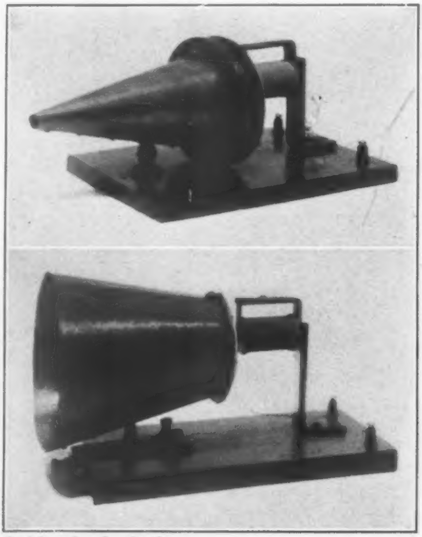
THE MANUFACTURE OF UTILITY PIPE

An interior view of the operating floor of a modern pipe foundry. Pipe for all three utility purposes—water, gas, and sewer service—are made in this fashion.

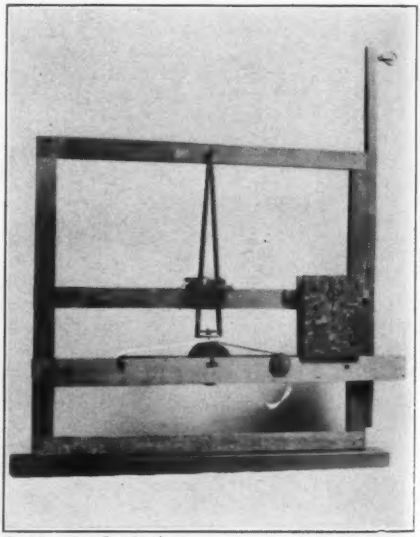
Bell Telephone Laboratories

Library of Congress

On October 18, 1892, sixteen years after he had invented the telephone, Alexander Graham Bell (left) opened the first long-distance line from New York to Chicago. Forty-six years before that, Samuel F. B. Morse (right) gave the first demonstration of his invention—the telegraph.

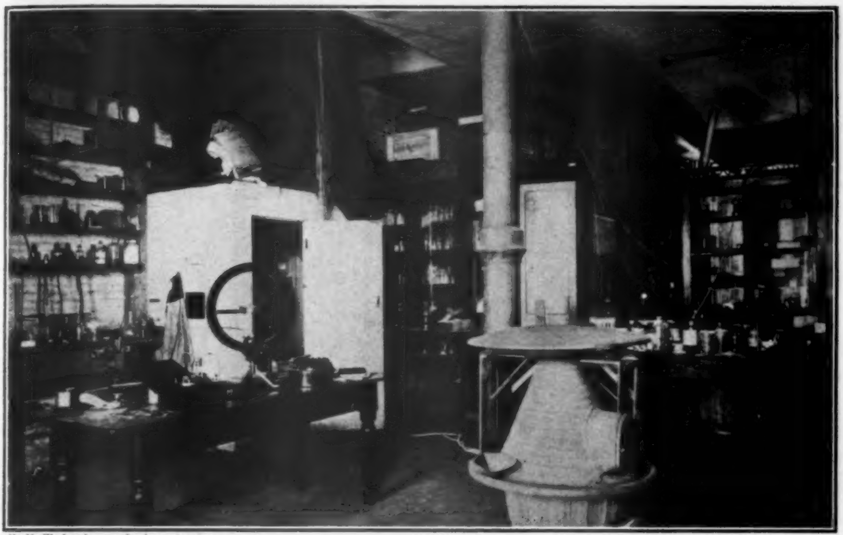


Smithsonian Institution



Smithsonian Institution

"Mr. Watson, come here, I want you"—these words by Bell to his assistant were the first ever to pass over the first telephone shown above (left). "What hath God wrought"—such was the first message tapped out by Morse, May 24, 1844, from Washington to Baltimore over the telegraph instrument shown above (right).

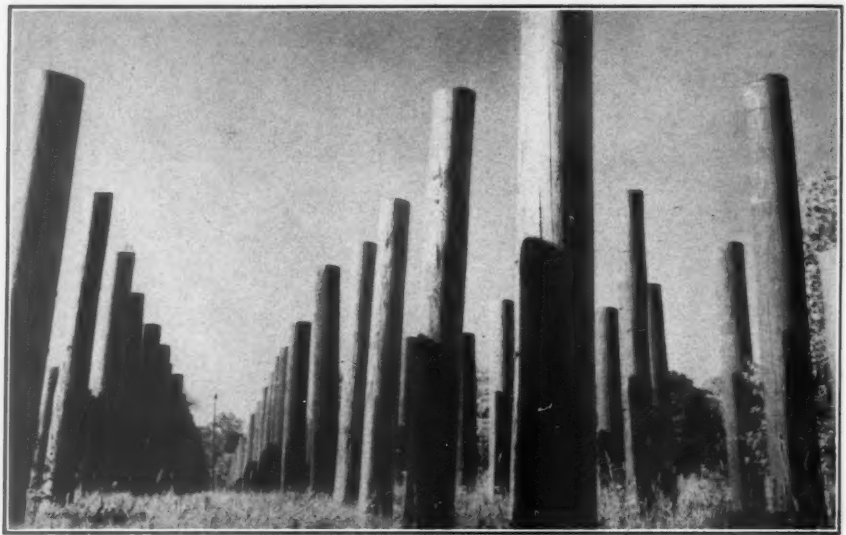


Bell Telephone Laboratories

Pearl Street is sacred to the telephone as well as the electrical industry. It was in this corner of a workshop at 141 Pearl Street in Boston that Bell worked feverishly on many strange materials, including a dead man's ear, to capture the secret of voice transmission.

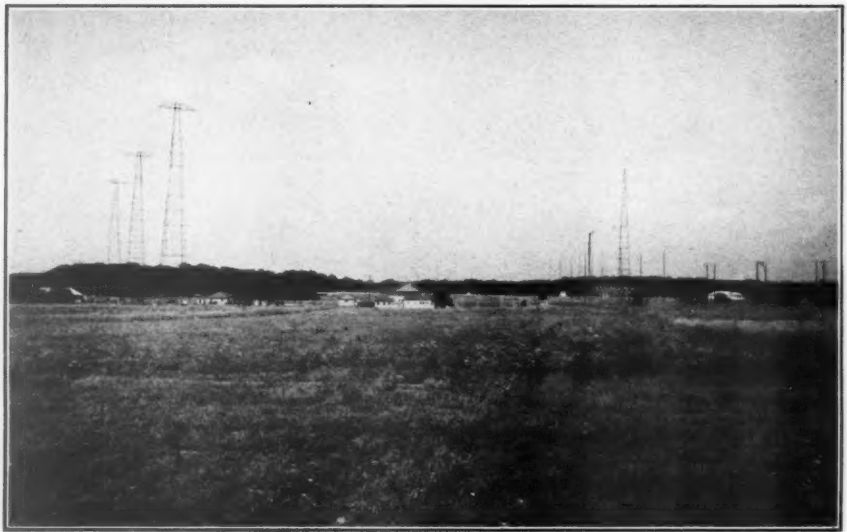
Bell Telephone Laboratories

The Bell Telephone Laboratory of today at 463 West Street in New York. Here scientific research goes on constantly for the benefit, not only of perfect telephony but such varied allied marvels as television, telephoto, wirephoto, talking pictures, and phonography.



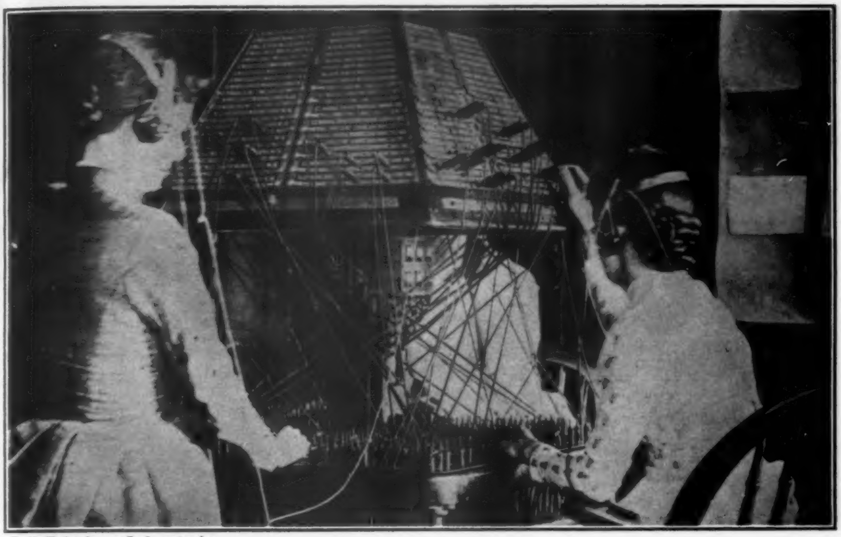
Bell Telephone Laboratories

A strange orchard. No worried farmer sprays this stout growth to thwart the voracious fruit bugs. The harvest of this test plantation at Chester, N. J., is telephone poles prepared for subterranean pests and the exposure to the elements.



Bell Telephone Laboratories

Even radio broadcasting is not beyond the scope of the busy scientists of the telephone industry. Here is a radio laboratory of the Bell system at Deal, New Jersey. If anything makes the slightest sound, Bell is interested.



Bell Telephone Laboratories

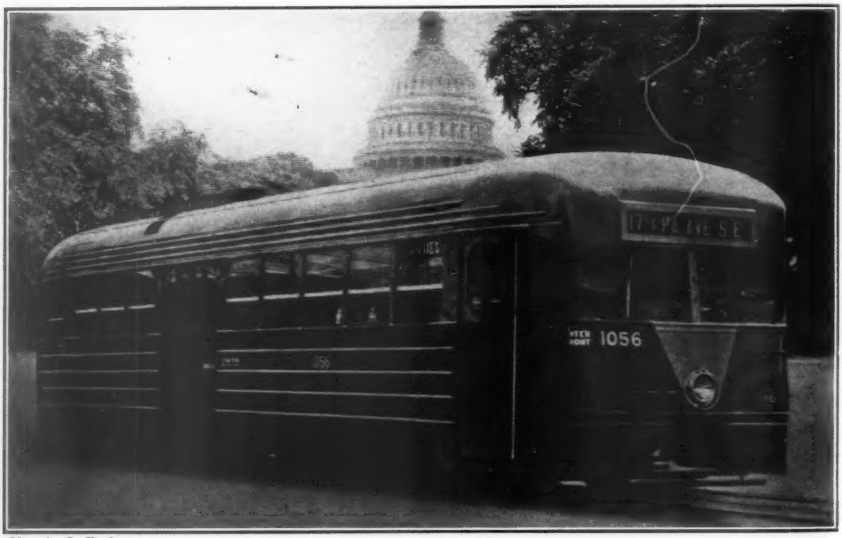
Boys, not girls, were the orignial phone operators. They made too much noise and were often impudent. Gradually the gentler sex was introduced to the mysteries of the switchboard and peace and patience returned. Above is a central office at Richmond, Va., in 1882.

Bell Telephone Laboratories

And here we are back to the twentieth century. This modern switchboard is in New York city, known as "Worth 2, Rector 2, Dial A." It can handle approximately 20,000 subscribers and often does so on rainy week days at about 5 P. M.

Smithsonian Institution

As early as 1847, an American, Moses Farmer, built an electric car which ran on batteries. This is the model as exhibited at the Chicago World's Fair in 1893. Forty-one years later, Frank Julian Sprague built the first practically successful electric railway at Richmond, Va.



Harris & Ewing

And here is the way people ride around in the Nation's Capital in the year 1936. This noiseless, streamlined model runs up and down Pennsylvania Avenue right past the Capitol, the White House, and most of the Federal department buildings.

Is TVA Really Hurting Private Utilities?

Not at all, in the opinion of the author, as the companies most vitally concerned, he says, are enjoying the best business in their history.

By DAVID E. LILIENTHAL
DIRECTOR, TENNESSEE VALLEY AUTHORITY

ONCE again national catastrophe of floods and loss of soil have focused the public mind upon conservation of the very basis of life: *water and soil.* The ravages of water out of control have cost the Northeast hundreds of millions of dollars, many lives, and untold suffering—all in a single spring. The wasting of top soil from the lands of the nation produces a continuing loss estimated at $400,000,000 annually. Conservation has become a truly national problem, one that recognizes neither partisanship nor state lines.

It is not enough that the public mind be aroused to the necessity for conservation and utilization of water and land: more than good intentions are necessary; vast appropriations are not enough. A practical and tested method—a plan—is essential.

To meet the urgent need for *planned conservation* the Tennessee Valley Authority was created three years ago. The Authority began at once putting into application what science and engineering have developed. The Tennessee river was the scene of the Authority's activities, but the project was intended and is in fact not merely regional, but national—an attack, in definite and concrete form, upon the conservation needs of a nation, not piecemeal and on an emergency basis, but planned, for a whole watershed.

These basic purposes of the TVA have sometimes been obscured because of the wide public discussion, by friends and opponents of the project, of the power phases of the program. It was this electricity program that I was requested to discuss in this article. But it seemed appropriate first to call attention once more to the broader foundations of the TVA project.

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I wish here to discuss only two points arising out of the electricity phase of the Authority's work: First, the public interest in a wider use of electricity as a national resource; and second, the effect of TVA policies and activities on private utilities.

THE source of the TVA electricity program lies in certain rather well-known engineering and constitutional principles. Following upon an exhaustive survey by the Army Engineers, Congress directed the Tennessee Valley Authority to provide a navigable channel throughout the length of the Tennessee river, and to provide for the control of destructive floods in the Tennessee and Mississippi basins. To carry out this mandate, the board has proceeded to the construction of a series of high dams on the main river and on the tributaries of the Tennessee river. These dams, together with Wilson dam at Muscle Shoals (already in operation), will provide control of water and a minimum 9-foot navigable channel throughout the year. Here we have a familiar and traditional function of the national government, the providing of an interstate highway of transportation, and the control of destructive waters on an interstate stream.

Everyone knows that when water falls, there is power in that water, power that men have used from time immemorial. So when TVA lets water through these dams in pursuance of its constitutional functions with respect to navigation and the control of floods, the question is not whether power *should* be developed—*the power is there* by the mere fact that water is falling. The question is whether the power in that falling water shall be harnessed and shall be utilized in the form of electricity by putting the water through turbines and generators, or whether that power should be allowed to go to waste.

UNDER any rational policy of planned conservation it is unthinkable that this power should be wasted, since with a relatively small additional investment of equipment it can be harnessed and put to work. And that is precisely what Congress has directed should be done. The economy of such a plan is apparent at once. If a dam is built for navigation alone, or flood control alone, or (as in the case of a private development) for power alone, obviously the cost of securing the public benefits of navigation, flood control, and power is less if all three purposes can be served by a single structure.

This vast potential supply of power created by these navigation and flood control dams is public property belonging to the people of the United States. Under the so-called property clause of the Constitution, Congress has authority and wide discretion to provide for the disposition of this public property of electric power.

Limitations upon the national government's right with respect to this power to "lease or sell and fix the terms" were recently urged upon the Supreme Court. But the court said, speaking through the Chief Justice: "The argument pressed upon us leads to absurd consequences in the denial, despite the broad terms of the constitutional provision, of a power of disposal which the public interest may im-

peratively require." [1] It is, of course, for Congress to determine what the "public interest" requires.

WHAT is to be done with this power? First it is to be used by the Authority, for its own purposes, and then by other government agencies. These uses consume great quantities of power. The remaining power is to be sold, or to use the words of the TVA Act, the board is authorized "in order to avoid the waste of water power, to transmit and market such power as in this act provided, and thereby, so far as may be practical, to assist in liquidating the cost or aid in the maintenance of the projects of the Authority."

In other words, the first duty of the TVA board with respect to the surplus of power not used for government purposes is to sell that power, and use the revenues to help pay the operating costs and repay the investment in the project.

The board has a duty to secure revenues. But in securing those revenues, *the widest possible use of electricity,* particularly in homes and on farms, is *specifically laid down* as a policy to guide the Authority. Though the project must plan to support itself, the policy is clearly one of maximum use, consistent with reasonable costs, not maximum financial returns.

[1] Ashwander *v.* Tennessee Valley Authority, 56 S. Ct. 466.

SOME of the statutory language is unusually interesting and worthy of study:

> This policy is further declared to be that the projects herein provided for shall be considered primarily as for the benefit of the people of the section as a whole and particularly the domestic and rural consumers to whom the power can economically be made available, and accordingly that sale to and use by industry shall be a secondary purpose, to be utilized principally to secure a sufficiently high load factor and revenue returns which will permit domestic and rural use at the lowest possible rates and in such manner as to encourage increased domestic and rural use of electricity.

In a provision of § 10, the statute expressly recognizes and emphasizes the deep social implications of electricity:

> That the Board is hereby authorized and directed to make studies, experiments, and determinations to promote the wider and better use of electric power for agricultural and domestic use, or for small or local industries, and it may coöperate with state governments, or their subdivisions or agencies, with educational or research institutions, and with coöperatives or other organizations, in the application of electric power to the fuller and better balanced development of the resources of the region.

Such a policy is a matter of moment to the electric industry, its customers, managers, and investors.

AS can be seen, under this law the Authority was faced with the problem of devising a price for elec-

¶ "EVERYONE *knows that when water falls, there is power in that water, power that men have used from time immemorial. So when TVA lets water through these dams in pursuance of its constitutional functions with respect to navigation and the control of floods, the question is not whether power should be developed—the power is there by the mere fact that water is falling."*

tricity which would result in maximum use, and yet would return to the Federal Treasury all the costs of producing and distributing that energy.

It is necessary to keep in mind that TVA, with limited and temporary exceptions, is selling electricity *at wholesale,* either at the power house, or by carrying it over transmission lines to the city gate. For example, TVA has a contract under which it is delivering power to the city of Pulaski, Tennessee, at wholesale. The city of Pulaski is the distributor, reselling that electricity to its residents, to industries, and to farmers in the surrounding territory. The only prices which involve TVA's *own costs* are the *wholesale* rates.

The cost of *generating* electricity forms only a small part of the total cost to the residential consumer or the farmer, ranging usually from about one sixth to one tenth. TVA prices for electricity *at wholesale* vary only a mill or two per kilowatt hour (in some cases less than a mill) from the wholesale rates generally charged in this area. A mill, or even several mills' difference in the wholesale price affects the rate charged the home user very little. For example, if the TVA wholesale rate is a mill a kilowatt hour lower than in your community, based on the national average usage, this difference would amount to about 5½ cents a month, and even a 2-mill difference will only amount to about 11 cents a month to the householder.

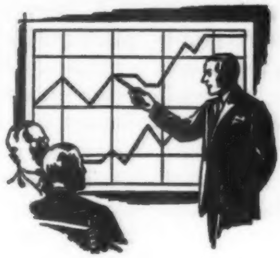
In the contracts with municipalities for sale of bulk power not only the wholesale rate but also the rates the city will charge the ultimate consumer are agreed upon by the Authority and the city. It is those rates to the consumer that are usually referred to as TVA rates. And it is those rates which show such a marked disparity from rates usually charged, a disparity far in excess of any mill or two difference in wholesale rates.

This is not the place for a lengthy presentation of the theory of price and cost in the field of electricity. But one principle of pricing must be clearly recognized, or the entire significance of the TVA electricity program is obscured: *the rate charged for electricity,* within wide limits, *determines the cost.* No analysis of rates for domestic electricity is worth serious consideration unless it is based on this principle.

By a happy coincidence, the social objective of wide utilization of electricity, and the business principle I have just stated, work in harmony. In a wide field of mass production, as everyone knows, increased demand results in less cost per unit. Limited production means high costs; wide consumption produces low costs. But how get wide use and in turn low costs? The answer TVA submits is: Low rates; *genuinely* low rates. Low rates will bring increased use, and increased use results in low costs. There are limits, but they are far off.

There is no dispute among utility managers about the principle; putting it into effect is another story.

Some critics say: We want to charge low rates, but we can't lower rates further until we can cut our costs, and we can't cut costs unless people buy more electricity. The TVA rates would probably work if people used twice as much electricity



The Wholesale Rate and the Consumer's Bill

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as they do, but until they do, such rates are impossible.

And with a few exceptions that is the answer, too, of the rate regulatory commission. With an eye fixed by law on present costs based on present consumption of electricity, the commission says: We can't order genuinely low rates because the lower rates would be below the cost of distribution. When people use more electricity, such rates would be feasible

In other words, in the regulation of rates under the fair value theory, plainly the cart is before the horse.

How does the consumer look at the matter? Usually he says: You cut prices for electricity and *then* I will use more.

The situation reminds you of the famous western statute designed to prevent accidents at railroad crossings, which provided that whenever two trains approach each other at a crossing *neither* shall pass until the other has gone.

THE cities and associations which have adopted the TVA rates smashed the vicious circle by drastically reducing rates—about fifty per cent in most cases. Within twenty-two months after placing in effect these low rates (a reduction of about fifty per cent) total residential consumption of electricity in Tupelo, Mississippi, increased 267 per cent. In Athens, Alabama, after eighteen months, there was an increase of 272 per cent, and in the same period in two county-wide associations in Alcorn and Pontotoc counties, in Mississippi, increases of 220 per cent and 293 per cent, respectively. In New Albany, Mississippi, in twelve months, there was an increase of 114 per cent,

and in Pulaski, Tennessee, after only eleven months' operation, an increase of 128 per cent, while in Dayton, Tennessee, the increase was 88 per cent in ten months.

Another reflection of the increase in usage following drastic rate reductions is in the change in the amount of electricity used by the average householder.

Under high rates, the average domestic user in Tupelo used 49 kilowatt hours a month, whereas after less than two years the average had reached 130 kilowatt hours per month, or considerably more than twice the national average of about 55 kilowatt hours.

Athens, Alabama, in an even shorter period, had an average use of 133 kilowatt hours per month. Similar results have been reached in other communities, using TVA rates, allowance being made for the shorter period during which the reduced rates have been in effect.

The experience of the private utilities in the TVA area under reduced rates I shall recount at a later point: the results in terms of increased use, compared with the national average experience, demonstrate the same principle.

This is neither academic theory nor swivel-chair prophecy. This principle is being put to the test of application. It is under trial by the utility companies in the valley area. It is being tested under a wide variety of conditions by all of the municipalities purchasing TVA power at wholesale. It is working out to such a degree that the southeastern states are now on their way to becoming the greatest users of electricity in the country.

AND now to my second point: what is the effect of the TVA upon private utilities in the valley region?

Out of the welter of charges and counter-charges involving the Tennessee Valley Authority program, there arises one central argument against this national undertaking: that in so far as it participates in making electricity available, TVA is destructive of the private utilities. It is destructive, so the argument runs, because it will undermine investments of private individuals in public utility properties in the valley area by disrupting first, and destroying eventually, the businesses upon which those investments depend.

This is not a new contention. It was put forth vigorously year after year as the Congress debated final disposition or use of the national wartime investment in properties at Muscle Shoals. It was urged strongly as an argument against the enactment of all previous Muscle Shoals bills, as well as against the enactment of the Tennessee Valley Authority Act of 1933. I need not recall to you the black strokes in which the picture was painted then and is painted now by opponents of this national enterprise.

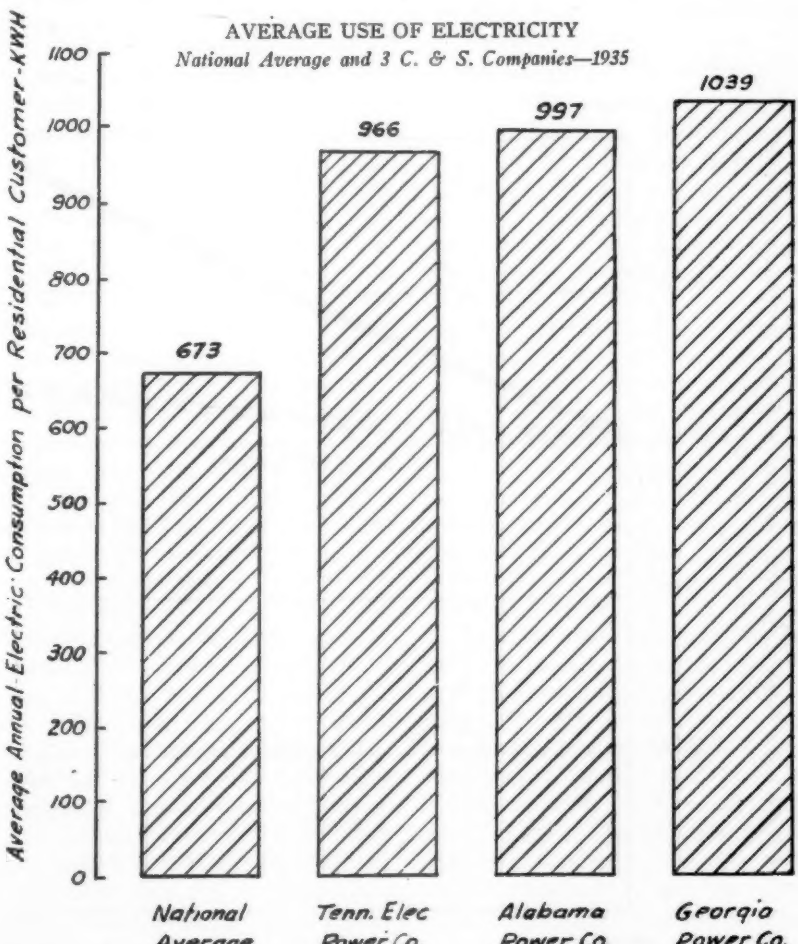
There is a difference, nevertheless, between the use of this particular indictment in 1936 and its use as prophecy in 1927, 1930, and 1933. The difference is this: we now have the results of some three years of actual operations of the TVA program. To this degree then, we are no longer speaking in terms of a hypothetical situation, or assessing the language of gloomy prophets.

Let us see what the result, in fact, has been.

Let me say, first of all, the record shows that far from being destroyed the private public utilities operating in the valley area in general are *enjoying the best business* in their history. To nail this statement down, let me recite the experience of three of these companies: the Tennessee Electric Power Company, the Alabama Power Company, and the Georgia Power Company, all subsidiary operating units of the Commonwealth and Southern System. If the TVA program were to undermine and demoralize any utilities companies in the valley, these three would certainly be among the first to be adversely affected.

AVERAGE USE OF ELECTRICITY

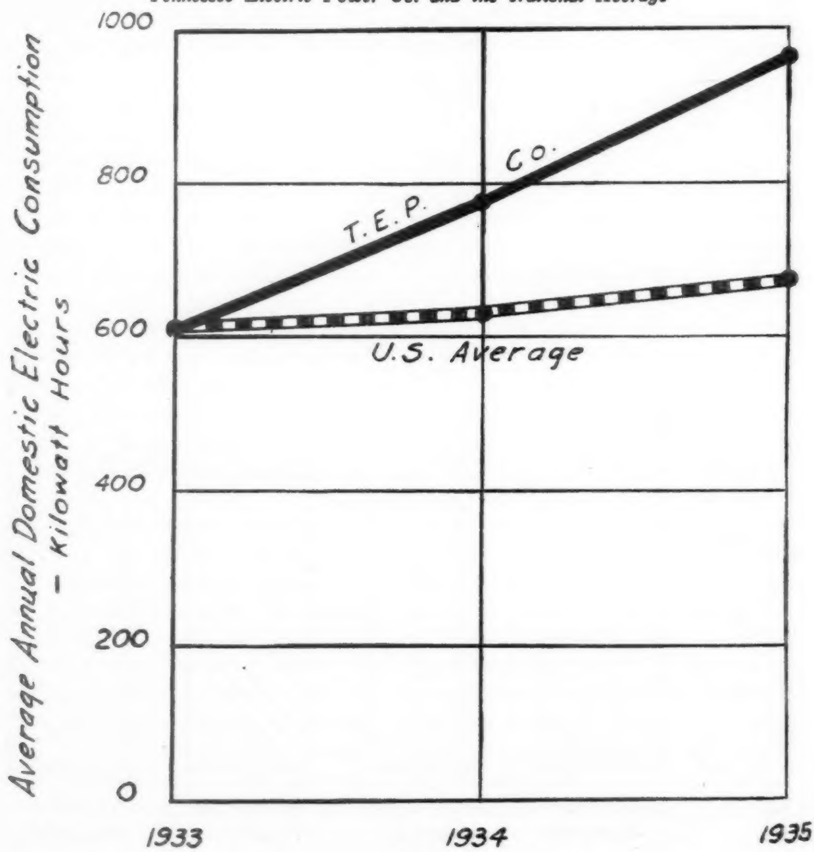
National Average and 3 C. & S. Companies—1935



First, let us see what the experience of these three companies has been as to use of electricity by their customers. According to the *Electrical World's* fifth semiannual survey of 103 utilities companies, for the full year of 1935 (in the March 14th issue of that journal), these three TVA area companies are now *leading all other companies east of the Rockies* in average residential consumption of electricity for 1935. The Georgia Company, with an average annual domestic kilowatt-hour consumption of 1,039, is first; the Alabama Company, with 997 kilowatt hours, is second; and the Tennessee Company, with 966 kilowatt hours, is third. Since the first of 1936 the Alabama and Tennessee companies have passed the 1,000 mark. Five of the six leading companies in the United States in in-

COMPARATIVE GROWTH SINCE 1933

Tennessee Electric Power Co. and the National Average



¶ "FINANCIALLY *the private utilities in the TVA area are prospering. Gross and net income are both on the increase. Not one company, so far as I know, has failed to cover interest and preferred dividends by a safe margin, despite considerable doubt of the validity of some capital structures.*"

creased domestic use for 1935 are located in the Southeast!

RANKED on the basis of increase in average domestic use for 1935 over 1934, the Tennessee Company, for the second consecutive year, *leads the entire country* with an average domestic gain of 192 kilowatt hours; the Georgia Company is fifth, with a gain of 151 kilowatt hours; and the Alabama Company is sixth, with a gain of 126 kilowatt hours. The national average for 1935 was 673 kilowatt hours per customer. The Tennessee Company, since it cut its rates by agreement with TVA in January, 1934, gained more than half as much as the *total* national average usage: a *gain* in the two years of these reduced rates of 355 kilowatt hours per customer. If you are manager or investor in a public utility wouldn't you like to be "destroyed" to the tune of such unprecedented increases in your business?

These high averages for domestic consumption and the record-breaking gains of 1935 over 1934 are all the more significant when it is recalled that the same companies made equally sensational gains in 1934. Indeed, the progress of one of these companies, the Tennessee Electric Power Company, was so remarkable that the Edison Electric Institute, in June, 1935, selected the Tennessee Company as the outstanding company in the country for 1934, because it had established, I quote from the award, "one of the most, if not the most remarkable sales increase in residential, commercial, and industrial power in the history of the electrical industry."

FINANCIALLY the private utilities in the TVA area are prospering. Gross and net income are both on the increase. Not one company, so far as I know, has failed to cover interest and preferred dividends by a safe margin, despite considerable doubt of the validity of some capital structures.

The Tennessee Company increased its gross earnings 8.1 per cent, coming up from $12,409,568 to $13,409,824. The net income increased 8.8 per cent, from $1,889,156 to $2,056,020. The balance available for surplus and common of this company showed even a more remarkable increase, coming up from $337,370 in 1934 to $505,140 in 1935, for an increase of 49.7 per cent.

The Alabama Company increased its gross earnings from $15,487,516 to $16,794,483, or a gain of 8.4 per cent. The net income, before preferred dividends, increased 9.5 per cent from $2,760,269 in 1934 to $3,023,384 in 1935. Here again the increase in the balance available for surplus and common showed a much more marked increase, coming up 62.9 per cent in 1935 over 1934, or a gain from $418,095 to $681,232.

ALTHOUGH gross earnings of the Georgia Company showed the smallest percentage increase, this company enjoyed the greatest increase in net income before preferred dividends and in balance for surplus and common. The gross earnings of the company were $22,122,957 in 1934 as compared with $23,698,272 in 1935, an increase of 7.1 per cent. The net income, however, increased 16 per cent, coming up from $3,898,299 in 1934 to $4,522,565 in 1935. The balance available for surplus and common showed a remarkable increase of 65.9 per cent coming up from $947,813 in 1934 to $1,572,106 in 1935.

In the face of these figures, the people who have been telling you hair-raising tales about the TVA ogre must feel pretty silly. They remind one of the White Queen in "Through the Looking-glass." You will remember that Alice was talking to the White Queen when the Queen began screaming: "Oh, oh, oh!" shaking her hand about as if she wanted to shake it off. "My finger's bleeding! Oh, oh, oh, oh!" . . . "What *is* the matter?" Alice said, as soon as there was a chance of making herself heard. "Have you pricked your finger?" "I haven't pricked it *yet,*" the Queen said, "but I soon shall—oh, oh, oh!"

THIS, then, is the record after three years of the Tennessee Valley Authority. There are no final answers, of course, but certain trends are appearing which can be recognized and appraised by anyone who wishes to apply to these questions an objective point of view. And in the long run, the nation at large will judge by the record as it is built up from this point forward. Emotional debate, however, is not going to settle the fate of the Tennessee Valley Authority.

A Capitalistic System

"OURS is a capitalistic social system. We are not here discussing the merits or demerits of that system. Concededly, it has many faults. Without doubt there are many evils in it yet to correct. But, be those facts as they may, it still remains true that under our system welfare for the mass of the people must filter down from the top, or perhaps it is more fitting to say, must filter outward from its source. In other words, those of our people who make their living with their hands and brains, will prosper when those who control the capital of the nation invest it in productive enterprise and when payrolls make it possible for the mass of the people to buy the products of that enterprise, whether it be manufactured or grown in the ground."

—E. P. CHASE,
Editor, Atlantic (Ia.) News-Telegraph.

Give Utility Merchandisers a Little Praise

THEY have been instrumental in bringing about an increased use of service, thereby adding to the householder's comforts and making decreases in rates possible; and they have benefited private dealers in appliances by coöperative sales campaigns in all parts of the country by which private dealers have obtained the bulk of the appliance business.

BY GEORGE E. WHITWELL

WITH evidence all around us of rapidly increasing domestic consumption of electricity, our attention is challenged by the part that has been played in this increased use by electric appliances. While many other factors have been operating, during the last year or two, as stimuli to increased consumption of electricity in the home, no locality has shown increased residential consumption of electricity without substantial increase in the rate of retail distribution of domestic appliances. Thereby hangs a tale which goes back many years for its beginning. It is the story of whether or not utilities should be permitted to merchandise appliances.

It is not this writer's purpose to revive a partisan discussion of this once controversial subject. Each locality has learned the best method for increasing the consumption of domestic electricity among its people. No conclusion applicable fairly to the entire United States can be drawn with respect to the merits or demerits of the sale of appliances by utilities and none will be attempted. Therefore, all statements of a general nature refer to majority experience with the full knowledge that exceptions exist.

There are outstanding examples of progress where utilities do not merchandise. Similarly, attention can be directed to localities where residence consumption of electricity seems to have advanced very slowly despite sales of appliances by the utility. Some utilities, generally located in sparsely settled communities or in small towns and cities, merchandise very aggressively, almost excluding the usually limited number of retail outlets. Other utilities, found most often in large metropolitan centers, sell a very small percentage of the total volume of appliances sold in their territories and often their selling is limited almost entirely to the so-called load-building

appliances having little or no popular acceptance. Still other utilities, selling no appliances, nevertheless engage in the practice of renting them. In short, there is a wide variation in policy.

HOWEVER, many more localities are served by utilities which do sell appliances than by those which do not. At the same time, the appliance business of other retailers has grown tremendously during the last two or three years. A large part of the controversy, which a few years ago went so far as to cause many state legislatures to consider the advisability of forbidding utilities by law to sell appliances and which resulted in such prohibition in two states has disappeared.

It is easy to recall the early days of the electric industry. Electricity was generated in small central stations. Power failures were frequent and of long duration. At that time lighting was the sole application of electricity. Only families of substantial means had electric lights and those lights were of low candle power. The service was unreliable and costly. People didn't understand electricity and, as a consequence, were afraid of it. The public was slow to accept it. The investment of capital in central stations was the wildest kind of speculation.

As the electric utility industry developed and more efficient, reliable, and economical methods of generation, transmission, and utilization were evolved, it found itself about fifteen years ago somewhat in the position of a manufacturer with potential production facilities in excess of the immediately available consuming market for his product. The industry needed a market—a very large one—but, first, this market had to be sold the devices for using electric current.

IT is not always realized that the cost of electricity is established more by the acts of the consumer than by the efficiency of the producer. The tremendous investment in equipment and the man power required to satisfy peak demands become a burden in the absence of steady consumption. The controlling factor in the cost per unit is not in the generating plant. It is at the other end of the line—a switch in the customer's premises.

As a public service institution, it has been and will continue to be the utility's obligation to render to its customers the best of service at the lowest possible cost. The lowest possible cost of residence electric service can come only when electricity is used freely. A somewhat homely example will make this clear: If you buy an automobile for $1,400, keep it for four years, and trade it in for $200, the fact that you have *owned* the car —without considering at all the expense of operating it—has cost you $1,200. If each year you travel 6,000 miles, your cost per mile, merely because you *owned* the car, has been 5 cents. If gasoline, oil, tires, repairs, and storage have cost you another 3 cents per mile, your automobile's total expense has averaged 8 cents per mile.

If, however, you run the automobile 12,000 miles each of the four years you own it, the cost of *owning* the car has been only 2½ cents per mile instead of 5 cents per mile. Adding in the operating cost of 3 cents

per mile, your total expense was only 5½ cents per mile. Therefore, simply because you have used your automobile twice as much under the second illustration as under the first, your cost per mile has been reduced by one third.

SIMILARLY, the same sort of thing happens with the costs involved in providing residential electricity. Power plants are built, transmission lines erected, distribution systems provided, and transformers and meters placed. When the use in the home is increased, these existing facilities are sufficient, generally, to provide service. Therefore, the cost of supplying these additional kilowatt hours of electricity goes down very sharply, exactly as greater use of an automobile produces materially lower total cost per mile.

The economic situation during the past four or five years has portrayed the fallacy of mass production in the absence of mass consumption. Wide distribution of electricity is the essential that has caused rates to be reduced to a level where electricity can be used freely by the family of small means. The assurance of widespread consumption is necessary before the electrical industry can undertake additional tremendous developments. These, in turn, bring about further reductions in costs and in rates for service.

The electric utility was, and is, able to render an overexpanding, ever lower-priced service only with a continually increasing use of electricity. It has been difficult, however, to convince the housewife who does not use electrical household helps that she is working unnecessarily at a wage of a cent or so per hour.

NEW uses for electricity have been invented but the public has been slow to appreciate their conveniences. The burden of popularizing them has been and still is upon the electric utility. Women hesitated to discard the old reliable flatiron in favor of the new-fangled electric one. They had grave doubts that a vacuum cleaner would actually remove dirt from their carpets. In turn, the washer, the refrigerator, the automatic range, and dozens of other appliances had to be promoted. Meanwhile other industries, driven by a natural competitive urge, were instilling thoughts of high cost and inefficiency in the minds of electricity's prospective users.

It is interesting to observe that many of these appliances are really electrified hardware. Fifteen years ago it was a rare thing to find, for example, a hardware dealer who would gamble even in a small way on the sale of electrical appliances. Since that time the utility, through its promotion of new uses for electricity and, in many instances, through its merchan-

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dising of appliances has brought a better realization of the value of electric conveniences and there has been created a substantial market for appliances.

The profit possibilities in the sale of such merchandise now has become attractive to many groups of retailers. Merchandise, originally pioneered almost exclusively by the utilities, is sold today by department stores, furniture stores, hardware stores, jewelers, and druggists. Chain groceries handle it. Mail-order and other chain stores find it profitable. There are contractors and specialty storekeepers whose livelihood depends entirely on the sale and installation of electric appliances. Many manufacturers and distributors sell direct to the consumer through highly trained, aggressive sales organizations.

THE retail census made about five years ago by the Department of Commerce indicated that there were then at least thirty-five different kinds of stores in which electrical merchandise was sold. As a result there exists a complex system of distribution, burdened with more difficulties than usually go with competitive business. There is the dumping of distress merchandise, excessive trade-in allowances, sensational premium offers, inadequate down payments, uneconomic instalment terms, and selling at the front door. Manufacturers function as wholesalers and both manufacturers and wholesalers function as retailers. The stage is constantly set for misunderstanding and, often, for trouble.

This whole retailing structure has been built on the sale of goods which in no sense can be called demand merchandise. People seldom make up their own minds initially to buy it. It must be advertised, demonstrated, aggressively promoted, and sold. Above all it needs constantly a stabilizing influence.

The utilities did not enter the merchandising field as a matter of choice. The promotion of appliances is an essential function if they are to continue to render better service at lower rates and extend their services to those not now enjoying the full benefits of electricity. Utilities are the logical balance-wheels in the appliance merchandising field.

IN the rapid building of the utilities' domestic load, many mistakes were made in the conduct of utility merchandising activities. It was only natural that this should happen. Most ill-advised policies, however, were voluntarily abandoned by offending utilities long before this subject became of interest to various trade organizations. It seems, however, that while the inauguration of an unsound policy becomes generally known in a few days, the abandonment of that policy is little known beyond a utility's front door. Yet today real understanding does exist between utilities and retailers and unintelligent controversy has disappeared.

There are two ways to sell merchandise. One is on a quality basis. The other is on a price basis. The utility, in its advertising, promotion, and merchandising, endeavors to build up acceptance of appliances on a quality basis. Such a practice tends to stabilize retail prices and selling policies for all retail outlets. Without it, the sale

Why Utilities Sold Appliances

"THE principal reason why utilities got into appliance merchandising in the first place is because nobody else at that time was interested. The selling job had to be done by the utilities. Today, while there are many dealers, the utilities are still needed. . . . Only this method will get them sold into the homes so that increased consumption of electricity will continue to bring lower rates and so that the public can enjoy satisfactory appliance performance."

of appliances can well revert into a business where low price will be the important consideration, and the most successful dealer will be the one who can swing the largest job lots of inferior or distress merchandise. It is decidedly in the public interest for only a minimum of substandard appliances to be used in the homes of this country.

The principal reason why utilities got into appliance merchandising in the first place is because nobody else at that time was interested. The selling job had to be done by the utilities. Today, while there are many dealers, the utilities are still needed. Although some electric appliances may now have sufficient customer acceptance so that people will buy them of their own accord, the great majority of electricity-consuming devices must be constantly and aggressively promoted. Only this method will get them sold into the homes so that increased consumption of electricity will continue to bring lower rates and so that the public can enjoy satisfactory appliance performance. Utilities are the only agencies that can always be depended upon to promote their business in the public interest.

TODAY the electric range and water heater and electric air conditioning are used by but small percentages of the people in this country. The same is true in the manufactured gas industry with respect to house heating and air conditioning. The proof of this statement each reader will probably find within his own experience. Which one of you has his home completely air conditioned through the use of either gas or electricity? Which one heats his home with manufactured gas? Which one cooks or heats water electrically? A major stumbling block in the way of having these comforts in your and in other homes is the fact that you have to buy the equipment to accomplish

these ends and you are not yet sold on it. Nor can the dealer in these devices, other than the utility, afford the promotional effort and the sales expense that will induce you and the public to buy these devices. Yet only through constantly expanded use of devices such as these, can the utility obtain the constantly increasing use of its product that it must have.

Two interesting tabulations appeared in the March, 1935, issue of *Electrical World* and two similar tabulations are to be found in the March, 1936, issue of the same magazine. In each of these issues one of the tabulations had to do with the annual electricity consumption of residence customers in those territories where the utilities merchandise; the other, with the annual consumption per customer in territories where utilities do not merchandise. In the former territories—namely where the utilities merchandise—the use of electricity per residence customer increased, during 1934 as compared with 1933, by 33 kilowatt hours; but in the other territories—namely, where the utilities do not merchandise—the increase in the average residence consumption, 1934 compared with 1933, was only 23 kilowatt hours. Similarly, comparing 1935 with 1934, the increase in the territories where the utilities merchandise was 57 kilowatt hours, whereas that for the limited number of territories where the utilities do not merchandise it was 49 kilowatt hours.

ONE of the outstanding results of the wider distribution of electric appliances has been the marked decreases in the prices of most, if not all, of these appliances, which through utility promotion have found greater and greater public acceptance. This public demand, bringing with it quantity sales, has resulted in lessened manufacturing and jobbing costs. These savings have been passed on to the public.

For example, a better washer can be bought today for $50 than could be bought fifteen years ago for $150. People of moderate means and those in the poorer classes can now enjoy the use of this appliance which formerly was limited to the medium and well-to-do. Even so, the washer—again used as an example—is found in less than half the homes in the United States. Eliminate now the promotional efforts of utility companies and continuing decreases in washer prices cannot be expected longer to occur.

It is less than ten years ago that the electric refrigerator was an expensive luxury, costing four or five hundred dollars and rarely, if ever, found offered for sale by a retailer other than the utility. There can be little doubt that utility merchandising was the most important single factor in creating a volume of business that has permitted the manufacturer today to offer a satisfactory refrigerator for about $100 and produced, in 1935, the sale of 1,400,000 refrigerators, the great majority of which were sold by retailers other than the utility.

WITH the newer applications of electricity, the job that has been partially done with appliances like washers and refrigerators remains still to be accomplished. Electric ranges today are relatively expensive. Electric water heaters and air conditioners are likewise. Only volume sales of

Statistics Showing the Experience in Kansas during the Period of Discontinued Utility Merchandising

Financial Strength of Dealer (Dun Rating)	*Percentage of Total Dealers in Group*	*Per cent of Dealers Reporting Increase*	*Decrease*	*No Change*
Over $200,000	3.8	66.7	22.2	11.1
$75,000–$200,000	6.8	35.3	58.9	5.8
$35,000–$ 75,000	13.2	26.7	70.0	3.3
$20,000–$ 35,000	11.4	26.7	70.0	3.3
$10,000–$ 20,000	18.2	13.5	82.8	3.7
$ 5,000–$ 10,000	13.5	25.7	65.8	8.5
Under $ 5,000	13.8	9.1	87.9	3.0
Not Rated	19.3	9.7	87.8	2.5
All Groups	100.0	20.3	74.8	4.9

these appliances will permit the manufacturers to reduce their prices and make them available to people of moderate circumstances. If we are to judge by past experience, it appears as if only utility merchandising, or some rental scheme in lieu thereof, can produce rapidly these volume sales of electric ranges, electric water heaters, and electric home air-conditioners. Eliminate utility merchandising and in most instances there is no agency left that can afford the job of bringing to the average man the comforts and labor saving that result from the use of these devices.

Naturally, the dealers' chief interest is in the merchandising profit on accepted appliances. Why should he wish to pioneer a new appliance? Of what interest is it to a dealer or to a hardware merchant to sell an item such as air conditioning that has no general public acceptance and in no way can be considered an item for merchandising profit? It makes little difference to the dealer whether the appliance he sells is operated by gas, by electricity, or even by hand. It is his desire to sell that which the public wants and that on which he can make a good merchandising profit.

THE merchant who sells a 98-cent electric toaster may care little about the continuous service of the power company or the safety of the persons using the toaster. Likewise, the dealer who sells a gas or electric refrigerator having a poorly insulated box, cares little about the low efficiency of this appliance and the consequent high cost and dissatisfaction to the user. Naturally, the dealer does not have his chief interest in these matters—his profit and loss sheet at

the end of the year does not depend upon such matters.

Of course, the dealers have an extremely important part to play in the distribution of electric and gas merchandise. The more advertising and selling that is done on particular appliances, the greater will become the market for these appliances. Thus the dealers not only profit by the advertising and sales promotional work done by the utility but also from the direct selling done by the salesmen of the utility. Conversely, the gas and electric utilities are interested in the maximum number of successful retail outlets to the end that these retail outlets will sell the maximum quantity of gas and electrical appliances, which in turn produce for the utilities the maximum sale of gas and electric service.

THROUGH the leadership of the utilities in all parts of the country there have been conducted outstanding dealer coöperative campaigns in which the dealers obtained the bulk of the business. Many recent campaigns have been held in which the utilities did a negligible percentage of the volume; yet the total business during the campaign periods far exceeded the normal business that would have been done had there not been a coördinated campaign sponsored and well supported by the utilities.

It has been mistakenly said that the utilities, where they merchandise, control the appliance market and get an unfair share of the volume of business. This is not true at the present time. In any localities where it may have been true in the past, the condition has been corrected to the satisfaction, at least, of those retailers doing a volume job in the appliance business in such localities.

It has been said by those who, in the past, have opposed utility merchandising, that if the utilities were put out of the appliance business the volume of merchandising done by them would of necessity go to other dealers. This is definitely not true. As proof, note the experiences in those territories which for a time have discontinued utility merchandising.

FOR Kansas, some exact statistics are available. During the period that the utilities in that state were not allowed to merchandise, the results found are outlined on page 757.

It is significant that, with the exception of dealers who sold more than $200,000 worth of merchandise in the year, the dealers lost business which they had enjoyed when the utilities merchandised. Throughout that state only 20 per cent of the dealers increased their business; 5 per cent were unchanged; and 75 per cent showed a decrease. The increases were attained by mail-order houses and chain stores, which sold between 20 and 25 per cent of the total electric appliance volume in the state. This compared with 1.9 per cent nationally. Small and medium-sized dealers suffered as a result of the anti-utility merchandising legislation in Kansas.

It has been indicated that the smaller the dealer, the more he needs the help of the utility. He receives that help through advertising, promotional work such as demonstrating, and in many cases actual financing of sales which alone he would not be in a position to make.

No recital on this subject would be complete without at least a brief reference to the legal aspects of utility merchandising.

In 1931 the Kansas legislature passed a law prohibiting the utilities from merchandising appliances. This act was subsequently declared unconstitutional by the Kansas Supreme Court. Here are a few passages of the court's opinion:

> . . . On the whole, the court is of the opinion that the selling of this merchandise by the plaintiff companies has been of benefit to them by causing an increase in consumption of gas. . . . The court is also of the opinion that merchants dealing in appliances could not and would never have brought about the increase in the use of gas.
> . . . the sale of gas appliances by these plaintiff gas companies is intimately connected with and incidental to the sale and distribution of gas, and is an implied power of such companies because it directly and proximately tends to accomplish the general purpose for which these companies were incorporated. . . . These plaintiffs have no exclusive right or privilege concerning the sale of these appliances. Any merchant or individual can sell them. The effect of the law is to create a monopoly rather than prevent one. . . . Is this then an exercise of police regulation in the interest of the public? . . . Our question is whether this particular class of corporation can be singled out by statute and deprived of a right and privilege that belongs to all individuals and most other corporations and would be right and proper for them to perform. It appears to be strictly class legislation without any reasonable relation to the welfare of the public.
> With no feature of public welfare actually involved, the conclusion surely must follow that to deprive these plaintiffs of an implied power and privilege incidental to their general business is unreasonable, arbitrary, unjust, and oppressive.[1]

In similar cases tried in the courts of the state of Texas, the courts held that a utility corporation, in the pursuit of its principal business of selling utility service, has the implied power to sell gas and electric appliances, except in communities where it is not engaged in rendering direct utility service.[2]

The Pennsylvania Supreme Court went a step further. The court not only upheld the legal right of utilities to sell appliances which are essential to the consumption of gas and electricity but has expressed the view that it is an obligation.

Perhaps no better concluding summation can be given than these statements from the bench.

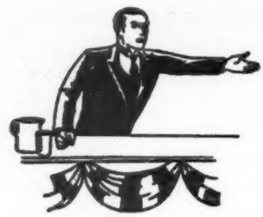
[1] Capital Gas & E. Co. *v.* Boynton, 137 Kan. 717, P.U.R.1933D, 435. The Supreme Court of the United States refused to grant an appeal subsequently taken from this decision.

[2] San Antonio Pub. Service Co. *v.* State (Tex. Civ. App. 1933) 62 S. W. (2d) 585; also State *v.* San Antonio Pub. Service Co. (Tex. Com. App. 1934) 69 S. W. (2d) 38.

How to Investigate Big Business

"A United States bank receiver, sent to take over the affairs of a big bank which had failed through dishonest practices, surprised the president of the bank by insulting him almost immediately upon his arrival. When asked why he did this, he replied: 'I know when I get into a mess like this that first of all they are going to try to bribe me. Failing that, they are going to try to frame me. So in this case I thought I would get the first two techniques out of the way quickly by breaking off friendly relations with them.'"

—Hugo L. Black,
United States Senator from Alabama, in Harpers.



Does Regulation Promote Progress and Efficiency?

Is modern regulation devoting too much attention to rates and not enough to efficiency and technical progress? Does it reward managerial success by taking it for granted? Does it penalize managerial initiative for taking laboratory chances? Does it, in brief, tend to reduce all regulated industry to a dead level of routine mediocrity? These are the challenging questions raised by the author who believes, however, that regulation can, by appropriate adjustment, be made to promote and encourage industry to reach higher peaks in technical efficiency and social service than ever before.

By ROBERT W. HARBESON

PROFESSOR OF ECONOMICS, RUTGERS UNIVERSITY

ALTHOUGH recent years have witnessed a notable increase in the quantity of literature, both professional and popular, devoted to public utility regulation, relatively little attention has been given to the problem of permanently insuring progressive and efficient management in these regulated industries. Nor has the attainment of this objective been of substantial concern to more than a few regulatory bodies, although in about a hundred cases since 1915 they have expressed sympathy with the idea of rewarding efficiency and penalizing inefficiency.[1]

Two closely related features of the public utility industry render it especially liable to stagnation: monopoly and regulation. Of course, the difference between public utilities and other industries with respect to these features is one of degree only. On the one hand, while communities have found it desirable to grant a single company the right to supply a particular service, the various public utility services, such as electricity and gas, are frequently competitive with one another. On the other hand, varying degrees of actual monopoly have become common in private industries, such as, for example, aluminum. Even more common is the existence of a few large rivals, as in the steel industry; a situation facilitating tacit understandings.

Again, while the public utility industry is notable for the degree to which regulation has been applied, private industry is likewise subject to a certain amount of regulation, such as

[1] Irvin Bussing, Public Utility Regulation and the So-Called Sliding Scale (Columbia University Press, 1936) p. 14.

that administered by the Federal Trade Commission. Furthermore, the need for stimulating progress and efficiency is not confined to public utilities, as was indicated by the findings of the Committee on the Elimination of Waste in Industry of the Federated American Engineering Societies in 1921. However, the tendency toward stagnation is much stronger in the public utility field than in private industry, by reason of the greater importance of monopoly and regulation.

This tendency of monopoly to foster stagnation has been long and frequently discussed in economic and other literature. The relative security which it confers is commonly reflected in a diminution of that restless striving for advantage, of that ingenuity in discovering possibilities of increasing gain or reducing expense, and of that preparedness for contingencies which characterize competitive business. The results are usually a retarded rate of technical advance and a lack of aggressive marketing policies. Nevertheless, in the public utility field there has been conspicuous technical advance, although many of the improvements have been developed in the manufacturing industries which sell to public utilities, and although there has been great variation in the promptness with which improvements have been adopted by the individual enterprises. How much faster and more far-reaching technical change would be in the public utility field if competition were a more active force, it is, of course, impossible to say; but thus far there seems to be no occasion for criticism of the industry as a whole on the ground of technical unprogressiveness.

The marketing policies of the utilities, at least in the electrical field, have become the subject of severe, and, to a large extent, justifiable criticism. It is generally agreed by students of public utilities that a very large number of the electric utilities have been conservative to the point of shortsightedness in the matter of making reductions in residential rates which would greatly increase the use of current. By reason of their monopolistic position the companies have been inclined to follow the path of least resistance, maintaining relatively high domestic rates which not only restrict consumption but which, because of this restricted consumption, fail to make the largest possible contribution to the net income of the enterprise.

Experience has amply demonstrated that within considerable limits a liberal reduction in domestic rates, embodied in a well-designed rate schedule of the so-called promotional type, will greatly increase the consumption of current, and will at least maintain, and often increase, net revenue. The explanation of this result is obviously the wider sharing of heavy overhead costs which remain fixed within considerable limits.

In spite of apathy and resistance of the companies there have been reductions in domestic electric rates in recent years as a result of several circumstances. In part the reductions have been secured by commissions through rate orders or negotiations, with results which were doubtless, in many cases, unexpected and unintended. In part they have been initiated by the companies, either with the purpose of forestalling rate orders, or

because of a desire to follow the example set by certain progressive firms, or to meet the actual or threatened competition of governmental enterprises, municipal and Federal.

This writer knows of no way to measure the relative importance of each of these influences. It should be noted in this connection that private companies, even under the most enlightened management, may be unable to match the rate reductions made by governmentally owned utilities, because the developmental period which will be incurred before the rates become compensatory may be longer than that for which private enterprises, having capital structure to support, can afford to plan.

A POLICY of reducing fixed charges would, of course, facilitate rate experimentation by private companies. It must also be noted that the reduction in domestic electric rates cannot be fairly measured by the drop in average revenue per kilowatt hour from domestic sales from 8.3 cents in 1918 to 5.07 cents in 1935. There has been an increase in consumption even where rates have not been reduced, so that a larger part of the current sold falls in the lower rate blocks and hence results in a lower average rate.

Unless conscious and sustained efforts are made to prevent it, regulation is likely to foster routine and inertia, to reduce operation to a dead level of mediocrity, to discourage initiative, and to drive energetic and progressive managers to other fields. To the extent that regulation produces these results it loses its *raison d'etre*. The most cogent argument in favor of private ownership and operation of utilities is that thereby the greatest initiative is brought to bear upon the problems of management, and hence that the public receives to the greatest extent the benefits of efficiency and technical progress. Therefore if managerial initiative cannot be maintained and encouraged under regulation we might as well proceed directly to public ownership.

CIRCUMSTANCES have made the relative neglect of this aspect of regulation more or less inevitable. The movement for utility regulation was originally and primarily a reform movement. Its main objective was the protection of consumers against unreasonable and unjustly discriminatory rates. The original emphasis of regulation was therefore restrictive and punitive, and that spirit still predominates. The task of protecting consumers (and recently the investors, as well) has grown so rapidly in size and complexity as to overtax the resources of the regulatory commissions.

The result is that both the commis-

¶ "EXPERIENCE *has amply demonstrated that within considerable limits a liberal reduction in domestic rates, embodied in a well-designed rate schedule of the so-called promotional type, will greatly increase the consumption of current, and will at least maintain, and often increase, net revenue."*

sions and the public have been so busy with the problem of improving the protective functions that a program for stimulating progress and efficiency has been neglected. Other factors have contributed to this situation: unsuitable appointments to posts on commissions, insecure tenure, inadequate appropriations, limited powers, the valuation muddle, and the like.

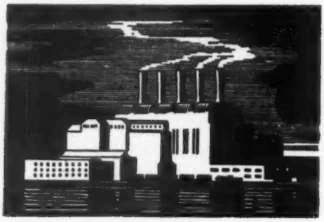
The movement for establishing Federal and municipal electric enterprises for "yardstick" purposes has been brought about because of the serious shortcomings of commission regulation not merely on the protective side but also because of the general lack of constructive policies which would insure to the public the benefits of progressive management. While complaints against exorbitant profits naturally figure prominently in this agitation a good deal has also been said about the necessity of establishing rates which would stimulate the domestic use of current.

THE Tennessee Valley Authority, especially, has emphasized that one of its major objectives is to demonstrate the possibilities in the way of low residential rates which would still be compensatory by reason of the greatly increased use of electricity which would result. Elsewhere the writer has expressed the view that resort to competition by government agencies as a substitute for regulation or complete government ownership is of very dubious economic merit, because it may result in unwarranted impairment of private investments, needless duplication of facilities, excess capacity, and inability to secure the full economies of large-scale production.[8] Such an expedient, moreover, is unnecessary, for the possibilities of regulation are far from having been thoroughly tested. So long as the people are unprepared to accept a régime of complete government ownership of designated public utilities the avoidance of the dangers of competition by government agencies should be a strong incentive to the vitalizing of regulation.

How may the objective of regulation which promotes progress and efficiency of management be achieved? A first and indispensable step is to remove so far as possible the conditions already referred to which have not only overtaxed commissions but have greatly impaired the effectiveness of their protective work. Nothing of consequence in the way of constructive efforts to promote progress and efficiency can be expected until substantial advance has been made toward the solution of these difficult problems. In brief, attention must be centered on a positive program for stimulating managerial initiative. Three related problems must be considered: (1) the provision of adequate and effective incentives; (2) the choice of automatic or nonautomatic arrangements for administering incentives; and (3) the choice between management and owners as recipients of rewards. These questions will be considered in turn.

THE question of the adequacy and effectiveness of the incentives to be offered is really the heart of the matter. It seems clear that the chief, though by no means exclusive, reliance

[8] R. W. Harbeson, "The Power Program of the Tennessee Valley Authority," 12 *Journal of Land & Public Utility Economics*, 19, at p. 32 (February, 1936).



Responsibility for "Yardstick" Movements

"THE *movement for establishing Federal and municipal electric enterprises for "yardstick" purposes has been brought about because of the serious shortcomings of commission regulation not merely on the protective side but also because of the general lack of constructive policies which would insure to the public the benefits of progressive management.*"

must be put on financial incentives, probably in the form of an addition to the rate of return allowed, specified as a reward for progress and efficiency. As to the amount of such rewards no definite rules can be laid down; the process of determining the proper sum must almost inevitably be one of trial and error, with consideration being given to the results secured and the necessity of holding and attracting able executives and technicians. As an administrative device, in order to furnish definite standards for choosing the companies to be rewarded, the possibilities of efficiency rating scales should be thoroughly explored. The companies would have to be separated into as homogeneous groups as possible for purposes of comparison.

Even then, the comparisons would have to be made with discrimination, having in mind the limitations of the rating scales and the special circumstances affecting individual enterprises. Moreover, the importance of offering adequate pecuniary rewards should not lead us to neglect the possibilities of nonfinancial incentives. Every effort should be made to encourage and find outlets for the motives of social self-esteem, emulation, and professional zeal in public utility management. The publication of efficiency rating scales, public recognition of distinguished service, and encouraging the professionalization of management will all be helpful.

THE necessity for incentives to progress and efficiency has been partly obscured by the technical advance shown by the utility industry, and by rate reductions even though tardy and inadequate. It is likely that the very ineffectiveness of control over utility profits to date has contributed substantially to technical progress. Control over utility profits must be made effective, but in proportion as

this objective is attained there will be greater need for direct incentives to managerial initiative. Not only technical progress but also voluntary experimentation with rate reductions to increase the use of electricity will be greatly stimulated by the offer of a share of the resulting gains. The essence of the matter could not be more clearly stated than in the following words of the late President Hadley:

> The more progressive an industry is in its character and methods, the worse does the public suffer from any attempt to limit its owners to a fixed rate of profit. For each introduction of new methods of operation is an experiment; and no one knows in advance whether an experiment will turn out well. If the government says to the company "If you succeed, you are limited to a normal rate of profit; if you fail, your shareholders must stand the loss"—it is obvious that the experiment will not be made at all.[3]

The problem of administering incentives must next be considered. Thus far interest has centered in various automatic plans which take the form of so-called sliding-scale agreements. These agreements provide that the profits allowed shall increase or decrease in proportion as the rates charged are decreased or increased. They originated in England in 1855 in connection with the regulation of the gas industry and have been continued and extended down to the present time. About 57 per cent of the statutory gas undertakings in England now operate under these arrangements.

THE Consumers Gas Company of Toronto has operated under a sliding-scale plan since 1887, and the Boston Consolidated Gas Company did so from 1905 to 1926. The scheme has been applied in connection with service-at-cost franchises for street railways, but is of no practical effect in this case because of the rapidly declining fortunes of the industry. The most outstanding current example of a sliding-scale agreement in the United States is that now operative in the District of Columbia, known as the Washington Plan. The consent decree embodying this plan terminated litigation in which the Potomac Electric Power Company had been involved almost continuously since the commission was established in 1913, and it is signficant that agreement between the company and commission as to valuation and other disputed matters was greatly hastened by the proposal to adopt the sliding scale.[4]

The details of the Washington Plan are already too well known to readers of PUBLIC UTILITIES FORTNIGHTLY to warrant more than a passing reference. Suffice it to say that in 1925 an agreement was made between the local electrical utility and the commission whereby the customers shared, in the form of rate reductions, profits in excess of 7½ per cent on an agreed rate base (later readjusted to 7 per cent with an increase in the customers' share on a graduated scale). Conversely, the plan provided, under specified conditions, for rate increases in the event that revenues ever fell beneath the basic return. Through this plan, the Washington residential electric rate has dropped annually from one of the highest to one of the lowest in the country. Meanwhile the company's

[3] A. T. Hadley, "Principles and Methods of Rate Regulation," 16 *Yale Review* 417–432, at p. 424 (April, 1927).

[4] The facts concerning the Washington Plan in this and the following paragraphs have been secured from the volume by Bussing, *op. cit.*

profits have been handsome and per customer consumption has increased 104 per cent in Washington, as compared with 51 per cent in the country as a whole.

THESE favorable results, of course, cannot be attributed solely to the sliding scale. Local conditions were and are favorable to the success of such a plan. The inhabitants of the capital city represent one of the highest level income groups in the country, a circumstance conducive to heavy appliance purchasing especially where low electric rates are an added sales argument. Furthermore, Washington has been shielded to some extent from the effects of the depression, and beginning with the latter part of 1933 it took on some aspects of a "boom" city. But most significant of all, in the writer's judgment, is the conclusion of Dr. Bussing that "One of the most important causes of the apparent success of the arrangement is to be found in the tireless, fair, and able supervision of the public utilities commission."[5] It should also be noted, as bearing on this point, that rates for gas in Washington (a mixed natural and manufactured supply is used) are also comparatively low, although until very recently there was no sliding-scale arrangement applying either to the Washington Gas Light Company, or to its affiliate, the Georgetown Gas Light Company.

It is difficult to determine how much of the credit for the success of the plan should be given to the sliding scale. Dr. Bussing was unable to measure statistically the effect of the latter on the efficiency with which the affairs of the company have been conducted, although he feels certain that the company has operated with more than average efficiency and that its public relations have clearly improved. It is likely, also, that the profit-sharing arrangement substantially increased the company's willingness to experiment with rate reductions. And finally, as already indicated, the sliding scale hastened the settlement of the seemingly interminable litigation concerning valuation and other matters in which the company had been involved.

THE success of the Washington Plan would seem to indicate that, given active coöperation on the part of the utility companies and constructive supervision by an able commission, the sliding scale affords a far more satisfactory form of control than that which now prevails, in that it reduces the amount of long and costly litigation, affords better protection to con-

[5] Bussing, *op. cit.*, p. 161.

¶ "THE *most cogent argument in favor of private ownership and operation of utilities is that thereby the greatest initiative is brought to bear upon the problems of management, and hence that the public receives to the greatest extent the benefits of efficiency and technical progress. Therefore if managerial initiative cannot be maintained and encouraged under regulation we might as well proceed directly to public ownership.*"

sumers, and attacks the neglected problem of stimulating managerial initative. But the qualifying phrase just mentioned—given active coöperation on the part of the utility companies and supervision by able commissions—suggests that all such schemes are subject to severe limitations.

The sliding scale is automatic only in the narrow sense of providing a definite mechanism for dividing profits between the company and its patrons. It implies prior agreement as to a valuation and a basic rate of return. It does not attack the important problem of the proper disposition of the company's share of extra profits, nor does it distinguish, as Dr. Bussing puts it, between "earned and gratuitous supernormal income." [6] It does not touch the problem of raising substandard performance to an acceptable level. But above all it lacks sufficient flexibility for the most effective dealing with an industry having such a rapidly growing market and such a highly dynamic technique as the utility industry.[7]

[6] Bussing, *op. cit.*, p. 162.

[7] The experience in Washington is instructive on this last point. As already indicated, the commission in 1933 found it necessary to modify the original agreement so as to reduce what it considered to be the excessive earnings of the company. It is clear that the root of the difficulty lay in the erroneous estimate by the commission of the probable return which the company would earn under the 1925 agreement. This was not the commission's fault. Fortunately, the revised plan was accepted without involving further legal difficulty than a single court decision. However, there is grave danger in such a situation that the morale of a company's executives may be impaired and their confidence in the good faith of the regulatory body lost. It is inevitable that a sliding-scale arrangement must largely fail to accomplish its objectives if, rightly or wrongly, a company's executives felt that they would be penalized for their efforts to make the arrangement a success. Needless to say, the writer is not here referring to the situation in Washington.

While sliding-scale agreements should be encouraged because they are capable of bringing definite improvement in the present régime of regulation, in order to avoid the foregoing difficulties the writer feels that they should constitute only a first step toward a permanent program of regulation designed to stimulate progress and efficiency. It is true, as Dr. Bussing says, that "In order to be effective a system of rewards and penalties must be formalized (though not crystallized) to a degree that management can count upon it." [8] It would seem that this objective could be attained by giving regulatory bodies a statutory mandate to adjust rates of return so as to give substantial rewards for managerial initiative.

The third of the major problems arising in connection with a program of regulation designed to stimulate progress and efficiency is the question whether stockholders or management or both should receive rewards for superior achievement. In so far as stockholders take an active part in determining the policy of a company and in choosing executives and holding them accountable for their performance there is obviously a good case for allowing them to share extra gains allowed for progress and efficiency. But such a situation, however, is not typical of modern large-scale enterprise, and is steadily becoming less common.

Messrs. Berle and Means have recently analyzed the increasingly common separation of ownership and control in large enterprises and the increasingly passive rôle of the rank

[8] Bussing, *op. cit.*, p. 14.

and file of security holders.[9] This tendency will be accentuated in the public utility field as regulation becomes more effective, through the virtual elimination of speculative elements in public utility securities—a policy which will also reduce the cost of capital in this field. It seems clear, therefore, by reason of the foregoing tendencies, that sooner or later management will have virtually complete responsibility for the conduct of public utility enterprises and hence should alone receive any rewards which may be distributed. As a transitional arrangement, until the foregoing arrangement is attained, rewards may properly be divided between stockholders and management. The desirability of using a portion of supernormal returns to reduce fixed charges, so as to facilitate rate experimentation and rate flexibility, should also be considered.

In conclusion, the bearing of the foregoing discussion on the situation in private industry should not be overlooked. While legislation has curbed the formation of outright monopolies except in the public utility field, there has nevertheless been increasing restraint on competition in basic industries. The existence of a few large rivals, together controlling a large share of the output of an industry and having tacit understandings as to price policy, has become an increasingly common situation. Thus far this muffling of competition does not appear to have had adverse consequences as regards technical progress, for, as is well known, many large private firms which enjoy this régime of restrained competition maintain elaborate research organizations.

However, the restriction of compepetition has not only contributed largely to the increasing rigidity of prices, causing serious maladjustments in the price structure, but has also greatly reduced the consumer's share of the benefits of technical progress. A large slice of the extra gains resulting from the combination of technical progress and restrained competition has gone to managements in the form of salaries and bonuses.

By reason of the widespread separation of ownership and control in large scale industry it is notorious that in a great many cases the amount and manner of distribution of this extra compensation have not been related with any precision to the contributions of management in the way of progress and efficiency. To the degree that this situation results in an extension of public control of private industry in the interest of consumers and investors the considerations discussed in this article with respect to the regulation of public utilities will assume added importance.

[9] "The Modern Corporation and Private Property." (MacMillan, 1933).

"I BELIEVE *I am well within the mark in saying that during the formative years of Lincoln's political life the Constitution could be frankly discussed by the man on the street without any fear on his part that he was committing an unforgivable political sin.*"

—Harold L. Ickes,
Secretary of the Interior.

Financial News and Comment

By OWEN ELY

Utility Earnings in First Quarter

AMERICAN Water Works & Electric Co. and subsidiaries reported, for the twelve months ended March 31st, $1.40 earned per share on the common stock compared with 94 cents last year.

Duquesne Light Co. in the twelve months ended February 29th reported net income of $10,547,143 against $10,180,764 last year.

Western Union Telegraph Co. in March reported gross earnings 11 per cent larger than last year, the gain being partially accounted for by increased communications in connection with the floods. Actual flood damage to Western Union properties was estimated at less than $200,000. The company's net income for the first quarter was equivalent to 92 cents a share, compared with 19 cents; for the twelve months ended March 31st, $5.76 was earned against $1.78 previously.

American Gas & Electric Co. in the first quarter of 1936 earned approximately 65 cents a share compared with 61 cents a year ago, according to an estimate by Dow Jones. During the first quarter sales of electricity gained 12 per cent, and April output increased about 15 per cent.

Niagara Hudson Power Co. in the twelve months ended March 31st reported 50 cents a share compared with 46 cents last year.

Commonwealth & Southern Corporation's earnings in the first three months showed a gain of 9 per cent in gross and about 22 per cent in net; after allowing for preferred dividends, about 3 cents a share on the common stock was earned compared with 1 cent last year.

American Light & Traction in the twelve months ended March 31st earned about $1.41 a share compared with $1.16 in the same period ended last year.

Pacific Gas & Electric in the twelve months ended March 31st earned $2.25 per share on the common stock against $1.62 last year. President Black ascribed most of the increase to the gas department, growth of electric revenue having been handicapped by lower rates and smaller sales last summer for agricultural pumping.

NATIONAL Power & Light in its report for the twelve months ended February 29th showed earnings equivalent to 83 cents a share on the common stock, against 88 cents last year; for the quarter ended February 29th, however, 33 cents a share was earned compared with 29 cents.

Federal Light & Traction Co. in the twelve months ended March 31st earned $2.36 a share on the common stock, compared with $1.96 last year; in the March quarter 82 cents was earned against 63 cents last year.

Columbia Gas & Electric in the twelve months ended March 31, 1936, earned 54 cents a share, against 21 cents last year; and for the first quarter 40 cents against 28 cents.

Brooklyn Union Gas Co. in the first quarter earned only 48 cents a share compared with $1.08 last year, the decline being largely due to new rates effective last December. The $3 dividend rate is being continued through the

first half of 1936 and the company is hopeful of regaining lost revenue through sales of gas-burning appliances, which are reported much greater in the first quarter than in any similar previous period.

Corporation News

ALABAMA Power Co. is reported to have sold its high-tension lines serving the Wilson dam to the TVA for a payment of about $1,150,000. The sale did not include any of the company's distributing systems in Tennessee valley cities, as disposal of these is prevented by an injunction in the Federal courts. TVA will sell power to the Alabama Power Co. on a "city-gate" basis, but the arrangement is temporary. President Martin, commenting on the agreement, stated that threats of government competition "have a serious effect on the company's rates by making it impossible for the company to refinance its bond and preferred stocks on the present money market."

J. G. White Co. have obtained exemption from the holding company provisions of the Utility Act, from the SEC. The company owns 40 per cent of the stock of the Foreign Light & Power Company and 25 per cent of the voting stock of the International Public Service Corporation of Maryland, which companies control properties in Rumania and Yugoslavia.

ACCORDING to the *Electrical World,* Councilman Bigelow of Cincinnati, head of the utilities' committee, has modified his previous position regarding a municipal power plant as the alternative to rate cuts by Cincinnati Gas & Electric (subsidiary of Columbia Gas). As now projected the proposed municipal plant would light only streets, parks, and public buildings.

A petition has been filed at Utica by counsel for intervening creditors asking that all proceedings in the reorganization petition against Associated Gas & Electric Co. be transferred to the southern district of New York.

Stockholders of Western Power Corporation have voted to increase the capitalization by issuance of 98,600 additional shares of common stock, as the first step in the plan for liquidating the company.

The Bell System during March showed a net increase of 77,500 stations compared with a gain of 46,000 stations a year ago. The gain was the best since October, 1929, with the exception of September, 1935 (which month was favored seasonally). For the quarter ending March 31st, 201,000 stations were gained, an increase of 80 per cent over last year's figure. New York Telephone Co.'s quarterly gain was about nine times as great as last year.

Holders of Beauharnois Light, Heat & Power Co. first mortgage 5½ per cent bonds have elected a protective committee in connection with the cancellation of the company's power contract with Ontario Hydroelectric Power Commission.

Duquesne Light Co., in its listing application for the new 3½ per cent bonds of 1965, states that the Pittsburgh floods did not seriously damage its property and that it has ample cash reserves against which expenses of rehabilitation can be charged.

Southern California Edison Co. and Pacific Gas & Electric Co. are revising and reinforcing the interconnections between the two companies, to provide for interchange of large blocks of power in 1937, in connection with the power which the Edison System will receive from Boulder dam. The perfection of interchange arrangements will relieve both companies of making any increases in plant capacity so long as power is obtainable from this common source.

FEDERAL Judge Woodward on May 15th dismissed the $150,000,000 suit of the Missouri-Kansas Pipe Line Co. receivers against the Columbia Gas & Electric Co. system. The Pipe Line Co. will receive $300,000 in cash, and the $5,500,000 notes owned by Columbia which it guaranteeed will be canceled. Half of the stock of the Pan-

handle Eastern Pipe Line Co., a subsidiary of Columbia Oil & Gas, is to be distributed to stockholders of the Missouri-Kansas Corporation in the ratio of one share to each four held. The $300,000 cash payment will permit payment of all creditors in full, following which the company will be liquidated. However, stockholders might realize some additional return should there be any favorable settlement of the $180,000,000 suit against the various Standard Oil companies, Doheney interests and others, now pending in New York.

Reorganization managers of the New York Railways Corporation have advised assenting holders of securities that an order in Federal court will be requested confirming the reorganization plan and authorizing immediate abandonment of railway franchises. The plan has been accepted by a large majority of the bondholders. Little attempt has been made to obtain the consent of preferred stockholders since the courts have ruled that this is not required under § 77B, but it is possible that the preferred stockholders may attempt further opposition to the plan through the courts. While bus operations have been installed on all but one route of the New York Railways system, the opposition of preferred stockholders has made it necessary to maintain minimum trolley operations at an estimated cost of over $1,500 a day. The transit commission also has to pass on several phases of the reorganization proceedings.

"Flood-Control" Again

THE United States Chamber of Commerce, Committee on Water Resources Policies, has concluded that "The entrance of the Federal government into the business of generating and distributing electric energy has neither social nor economic justification." The committee favored development of by-product power from Federal enterprises through local rather than Federal agencies. It pointed out that generation of "incidental" power by means of flood-control dams is fallacious, since pools must be empty if floods are anticipated, and their utility for flood control is minimized if they are constantly partly full for production of power.

In this connection it is interesting to note that the citizens of Chattanooga, chief city on the Tennessee river, are asking the government for $15,000,000 to protect the city against floods—despite the "flood control" program of TVA.

Status of PWA Projects Continues Uncertain

DUKE Power Co. and Southern Public Utilities Co. have filed an appeal with the U. S. Supreme Court in the famous Buzzard Roost Case, which involves a PWA loan of $2,852,000 to Greenwood county, S. C., for a hydroelectric development. It is doubtful, however, whether the case can be heard before the court recesses for the summer.

Progress in testing PWA grants for municipal power systems continues slow. Hearings in six suits which had been consolidated to provide a broad test opened in the District of Columbia Supreme Court late in April. The plaintiffs were Alabama Power, Texas Utilities, Iowa City Power & Light, and Oklahoma Utilities. The companies have sought evidence that PWA representatives throughout the country have been actively encouraging municipalities to build plants or distributing systems which would oust private companies. Alabama Power introduced evidence (over government protest) that it had offered to sell its facilities to several cities before they were offered PWA money for competing systems.

Chief Justice Wheat ruled against introduction of certain evidence by attorneys for the utilities (Dean Acheson, former Assistant Secretary of the Treasury in the present administration, and Newton D. Baker) to prove that the PWA loans would furnish little employment. Certain attempts to show

that private companies would be injured were also sidetracked, although the Chief Justice had earlier permitted testimony showing that loans and grants for six Alabama municipal plants might cost Alabama Power Co. about $704,000 out of some $1,187,000 invested.

THE $56,000,000 "model state power system" in Nebraska, otherwise known as the "Little TVA" is, like some 60-odd smaller experiments in municipal ownership sponsored by the PWA, being held up in the courts. Vice President Page of the Nebraska Power Co. recently replied to Secretary Ickes' charge of delay by stating that the power companies were anxious to have the case tried as quickly as possible in the District of Columbia Supreme Court. The companies were said to have had a large force of attorneys and executives in Washington for two weeks, waiting for the case to be tried as agreed, while government counsel had sought a "continuance" and were unwilling to coöperate for an immediate trial.

The recent Wisconsin election results, in which Milwaukee, Sheboygan, and a number of smaller municipalities decisively defeated public ownership proposals, seem to indicate that the administration's nation-wide efforts to promote municipal ownership are not merely being delayed in the courts, but are also meeting a definite check in public sentiment.

The FPC's Picture of the Power Industry

THE Federal Power Commission is apparently behind schedule with its studies of the electric power industry—release of the following statistics would have been more appropriate, perhaps, during last summer's feverish debate over the Utility Act:

The electric industry has a book value of about $13,000,000,000, serves some 25,000,000 customers, and has an annual gross income of about $2,000,000,000. Ninety per cent of the industry is controlled by 57 systems, and 12 of these control about half of the country's generating capacity. In order of size, the leading groups are as follows: Electric Bond & Share, Consolidated Gas of New York, Commonwealth & Southern, North American, Niagara Hudson Power, Standard Power & Light, Pacific Gas & Electric, United Gas Improvement, and Associated Gas & Electric. (Incidentally, it might be mentioned that 3 of the 7 largest conduct only an intrastate business; that one other is largely an investment company, and another owns its subsidiaries practically outright.)

About 75 per cent of the population now lives in homes lighted by electricity, according to the report. The industry supplies about 55 per cent of the energy used by manufacturers and about 63 per cent of that used by the mining industry. There are about 1,620 privately owned and 1,930 municipal systems, supplying electricity to 25,400 communities and to about 10 per cent of the rural population. There are about 4,228 power plants supplying electric energy, with a total generating capacity of over 34,000,000 kilowatts.

Unemployment

THE presidential campaign, now beginning to get under way, seems likely to center around the question of employment and relief policies, plus the accompanying fiscal problem of balancing the budget. *The New York Sun* has compiled interesting statistical information to show that manufacturing industries in general are doing their full share to relieve unemployment, and that the major relief problem is in the agricultural areas as a result of the administration policy of reducing farm production.

It is generally recognized by practical economists that, outside the farm areas, the major employment problem is in the construction and heavy industries which have lagged behind the usual rate of recovery. Since the utility industry is normally a large contributor to

heavy construction work, it is obvious that the uncertainties resulting from the government's antagonism to utility management has been a great obstacle to the resumption of building plans for this industry.

President Willkie of Commonwealth & Southern Corporation, speaking over a nation-wide hookup, recently declared that if the administration had been satisfied with sane regulation, we might now be proceeding with a $3,500,000,000 public utility expansion program. "The price which the American public has paid in order that the politicians could enjoy and exercise their hatred has been incalculable," he stated.

Unusual Gains in Electric Output

In the week ended May 2nd, electric output in the United States exceeded 1,928,000,000 kilowatt hours, according to the Edison Electric Institute, exceeding the record of any earlier year for the same period by nearly 14 per cent (the previous record having been in 1930). The present excess over 1929–30 is the greatest thus far shown, and with one exception the week's gain is the largest reported since last November. The week's output, which was slightly above the average for April and considerably above March, is contrary to the seasonal trend.

The *Times* weekly index of electric-power production (seasonally adjusted) stood at 114 for the week ended May 2nd compared with 109.8 in the week ended March 28th (reduced by flood conditions) and 98.2 about a year ago. The *New York Times* on May 8th stated:

> The current level of electric power output is somewhat of a puzzle to the closest students of the industry. Some recession has been noted in all industrial areas, but the mainly agricultural districts are tending to improve. Even with all the irrigation pumping, outdoor works of various characters, and other uses which tend to expand at this season, however, the level of production is considered surprisingly high for the season. Normally, April and early May show slight declines from previous levels. This year, April shows the result of industrial activity deferred by the floods or necessitated by their aftermath, but it is the extension of high output totals into a period when weekly results tend to stabilize in anticipation of a mid-summer upturn that is surprising the experts. If seasonal precedents are to hold good, next fall will show some astonishing power figures.

The Problem of Taxes

The Illinois Supreme Court recently sustained the right of Western United Gas & Electric Co. to increase its basic gas rate 3 per cent to offset a corresponding tax on gross revenues levied by the city of Elmhurst. While the decision may have to be buttressed by other decisions before it may afford any general relief to utilities, it may help to check the present tendency of municipalities to place special taxes on utilities in addition to the older realty and franchise impositions. According to the *Electrical World*, commercial utility companies paid total taxes last year of $258,000,000 which was $21,000,000 in excess of the amount spent for additions and betterments.

The Michigan Public Utilities Commission recently concluded in connection with an investigation of Consumers Power Co. (Commonwealth & Southern subsidiary) "that for municipalities which levy special taxes, license fees, or street rentals against the company, the standard of rates should be increased within the limits of such municipalities so as to offset such special charges and thereby prevent the customers in other localities from being compelled to share any portion of such local increases."

Southern states which have apparently benefited from TVA expenditures now realize that they are losing local tax revenues because Federal properties are exempt. In several northern Alabama counties, for example, the decrease in assessments has run as high as 37 per cent, according to the University of Alabama's bureau of business research. Alabama Power Co. reports that it and the Tennessee Electric Power together

paid $4,500,000 in taxes last year, while TVA paid only $16,900; and if TVA should take all light and power properties off local tax rolls, some $2,000,000 taxes would be wiped out.

Senator Wheeler to Investigate 1935 Rise in Utility Stocks

SENATOR Wheeler has asked the SEC to supply the Senate Interstate Commerce Committee with a list of holding company stocks bought and sold by executives of electric light and power companies in the period February 6 to August 26, 1935. The rise in utility stocks during this period, according to the Senator, "led me to wonder if perhaps some of these holding company executives were not buying up this stock at the same time they were advising the public that the holding company act would make it worthless."

Senator Wheeler has apparently picked a date which coincided quite closely with the lowest depression prices for many holding company stocks, although industrial and railroad stocks had already enjoyed large gains from depression lows as a result of business recovery. Moreover, despite earlier gains, leading industrials and rails also showed substantial gains during the period selected by Senator Wheeler. Also, it seems probable that some part of the rise in utility stocks was due to (1) a belief that the terms of the original bill would be moderated and (2) the assumption that if a "radical" bill should be enacted it would be declared unconstitutional by the Supreme Court, as was NRA.

A more logical comparison might be to show the extent of recovery from the depression lows of 1932 to the level of August 26, 1935, for the three groups (as reflected in the Dow Jones averages):

	1932 Lows	*August 26, 1935*	*% Gain*
Rail average	13.23	35.72	170
Utility average ..	16.53	25.46	54%
Industrial average	41.22	128.99	212

On this basis of comparison the effects of government "regimentation" of utilities is only too apparent, particularly when the great popularity of these stocks in 1929 is recalled.

Conflict of State and Federal Regulation

THE following is summarized from the results of a questionnaire circulated among state commissions by the Federal Power Commission: Delaware is the only state which does not regulate utilities, but five states have no jurisdiction over electric power companies and three others have no authority to regulate electric rates. Only twelve commissions have complete jurisdiction over rates charged by municipally owned electric companies, although nine others can regulate rates outside of the city limits. In four states such companies are not allowed to serve customers outside corporate limits (in only eleven states do they have the unconditional right to serve outside city limits).

In seventeen states contracts with management companies, legal firms, etc., require commission approval. In thirteen states service in rural areas is subject to commission rules. Submetering is prohibited or discouraged in a majority of states and customers' deposits are regulated.

Possibly the purpose of this publication was to stress the need for Federal regulation to plug the "holes" in state regulation. But an offsetting difficulty is that with the vast powers given to the various Federal agencies considerable conflict with state bodies may develop.

For example, the FPC has ignored the protest of the New York Public Service Commission in holding hearings on an Associated Gas merger program, involving subsidiaries in New York state. Chairman Maltbie of the New York commission wrote Chairman McNinch of the FPC asking that action be postponed because no application to the state authorities had been made for authorization, but the FPC proceeded with its hearings.

What Others Think

Is Technical Science Doing Its Social Duty?

It isn't fashionable in the best, that is to say the "smartest," economic circles to quote Adam Smith's "Wealth of Nations" any more. Mere mention of the name, except in criticism, causes uplifted eyebrows on those Olympian intellectual heights where dwells the Park avenue proletarian. Some of the younger and more modern economists appear to have dispensed with reading Adam Smith entirely, as well as a few other time-worn materials that students way back in 1920 or thereabouts used to regard as fundamentals of economics.

Just the same, Adam Smith pointed out a number of principles that seem not only true but also trite today. Among them was his simple demonstration that surplus capital—meaning capital no longer needed or unable to be profitably used at home—inevitably spills out into foreign fields where the adventure is greater and the profits more speculative but correspondingly higher. Adam Smith was speaking, of course, about colonial enterprise, opportunities for which abounded in his day. When the United States started in the business of being a nation on its own responsibility, the use of such surplus capital for foreign enterprise naturally transferred itself into the exploitation of our frontiers. This went on with very satisfactory results until the depression of 1929 brought us up sharply against the truth that we were fresh out of frontiers.

It was during this time, as most of us will remember with mixed feelings, that former President Hoover suggested that science could and should discover a few new frontiers—such as radio, a completely new enterprise that offered opportunity for surplus capital and surplus labor. Such discoveries, we were assured, would assuage our growing pains just as effectively as the Louisiana Purchase and the conquest of the West.

Well, what has science done about it? Charles F. Kettering, one of the country's foremost "technologists," speaking to the New York State Bankers' Association last February, told the bankers that he was apologizing for the "poor job" that technology had done. The trouble appeared to be that American technology had not gone far enough nor fast enough. This news jars many of us who have supposed that the deeds of our industrial technicians were far ahead of our other learned professions. Mr. Kettering explained, however, that technology in American industry has mostly confined itself to making old industries almost automatic instead of developing new industries. The result was that we had forty billion of unused credit and ten million unemployed. New industries, it was observed, might have absorbed both.

The Wall Street Journal, commenting editorially on Mr. Kettering's interesting challenge, makes a point of interest to the electrical utility industry and to the electrical manufacturing industry that supports it. By close analogy it should also interest the progressive gas utility and manufacturing groups:

> It smells like a paradox, yet it is true. We need go no farther back than fifteen years for the proof. When we came out of the war in 1919 and liquidated the immediate credit troubles, we had two new industries in course of active development. One was motors, the other was electric power. The motor industry was only just entering on its great growth. Two thirds of the fifteen billions of investment in the electric power industry was made since 1920. Between these two a wide channel was opened for new capital investment and the amount of money poured through it since then is probably equal to at least the forty billions

of idle bank credit existing today. The problem now is to devise other and new channels for capital investment. This is mainly technology's job, but Mr. Kettering thinks that bankers, too, are partly to blame, for not seeing and insisting on recognition that it is a job to be done.

Thus it will be seen that in the utility field there is probably less cause for Mr. Kettering's criticism of technology than in textiles, foods, building, and other older industrial lines, where technology has been more concerned with throwing more labor out of work than with devising new devices for employing it.

ANOTHER angle that complicates this question of the social responsibility of industrial technology is the government. The problem of maintaining equilibrium between capital savings and capital investment—a problem brought home to us very bitterly by the depression—is so important that many feel that only the government is big enough to act as regulator. Assuming this to be true for purposes of argument, how could the government possibly act as an economic governor unless it took over technology's job? This is something big and something mighty serious for industrial technicians to think about. It is easy enough to argue that the government would make a sorry failure at such a job, but it would be a far better, in fact a complete, answer if private technology, according to Mr. Kettering, would set about to develop an impressive sense of social responsbility of its own.

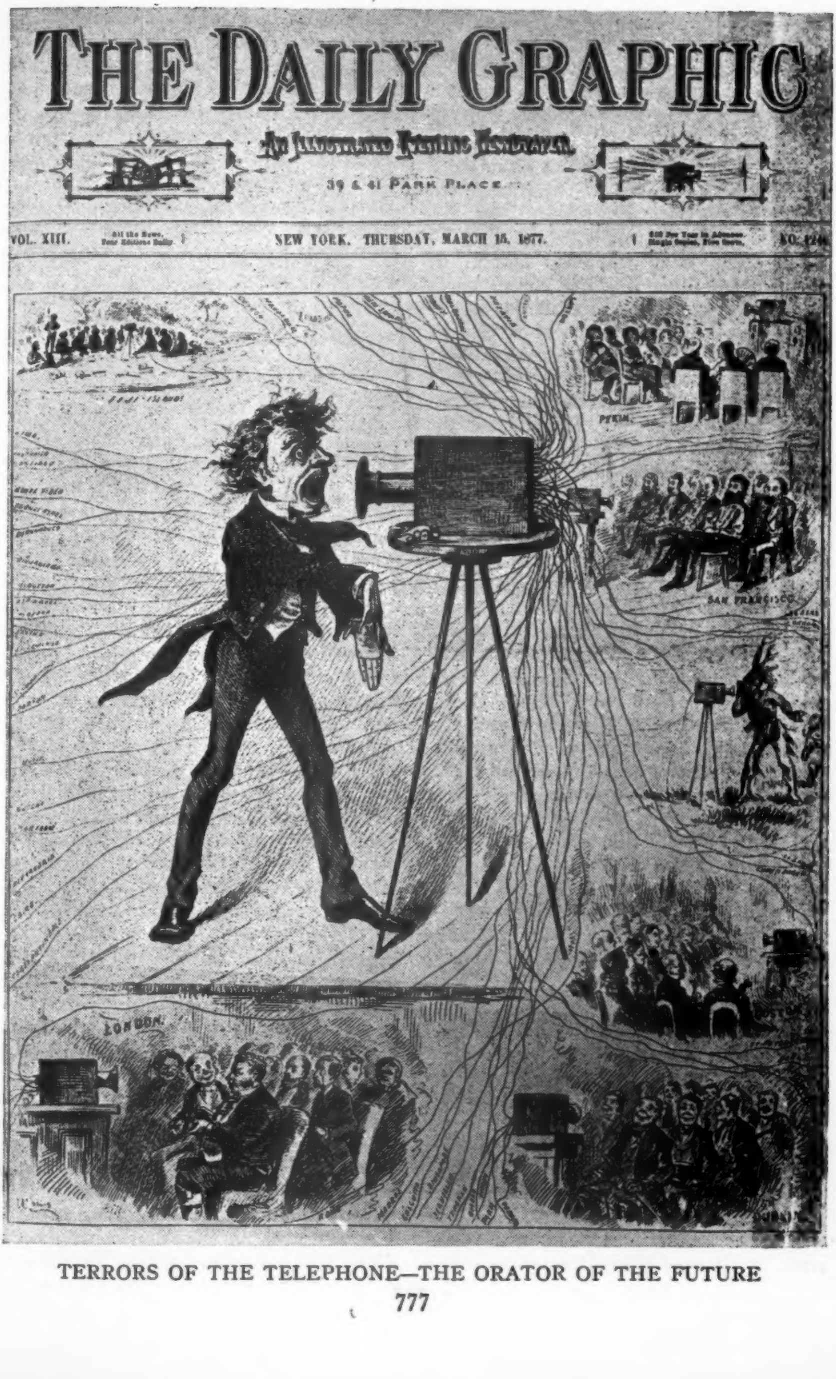
Scoville Hamlin, noted economist and author, believes a great deal of the confusion about technological unemployment arises out of our loose methods of measuring it. Scientists, such as Compton, Milliken, and Jewett, scoff at the matter and insist that technology has made more jobs, while at the same time making more leisure and improving general social standards. Labor leaders, such as President Green of the American Federation of Labor, on the other hand, point to the lag in employment recovery as compared with business recovery. Both, in Hamlin's estimation, are partially in error. Unemployment figures, he says, do not indicate to what extent yearly employment is being affected by power machinery and population increase. A man's weekly or daily pay envelope may show an increase, while his annual earnings decrease. Again, a mechanic may make twice as much per day in 1936 as he would have made in 1916 by working half as many hours. Another point made by Mr. Hamlin:

The influence of power machinery and technology upon the growth of wealth and population has been phenominal. Better food, better hygiene, and fewer famines stimulated the birth rate and decreased the death rate. As a result the human race reached a rate of increase during the nineteenth century that was enormously great as compared with anything in the past. A world population of approximately 640 million human beings in 1800, now numbers over two billion. About one half of these human beings are living close to a bare subsistence level. More people are living within the reach of starvation today than inhabited the world in 1800.

MR. Hamlin agrees that "to continue to employ power machinery and science for expansion rather than for improvement in standards of population" will only inevitably result in diminishing income returns and falling standards of living. But first of all we must measure these factors accurately. In the absence of a measure of cost suited to a machine economy, "we lack a dividing line between sustained and temporary consumption." Profits and income become hopelessly confused. In the confusion, earnings that belong in the upkeep account become transferred without the people knowing about the transfer.

Labor also has its responsibility in keeping production within social bounds. Mr. Hamlin concludes:

If labor is to assume its measure of responsibility for keeping the growth of production and income in balance, then it will involve the treatment of labor as an investment, with a measure of responsibility for overhead. This responsibility can be realized by paying the investors of capital and labor a wage return on the basis of an output that will cover overhead. Any income over above this overhead would have to be divided between the investors of capital and labor on a predetermined basis. This co-



TERRORS OF THE TELEPHONE—THE ORATOR OF THE FUTURE

partnership interest in income would involve capital and labor in the responsibility for the balancing of the capacity to produce and distribute and the capacity to consume.

It is balance here that must be sustained if we are to avoid the evils of idle men and idle machines, if we are to make possible full-time employment of capital and labor, if we are to realize higher standards of living all along the line, permanently financed out of income.

MAYBE the answer is "chemurgy,"—that very modern school of thought for diverting raw commodities into quite different products: Sugar from wood pulp; rubber tires out of sawdust; fuel out of haycocks; beef steaks from steel wool, etc., etc. However, if the new products are not to ruin existing industries in competing for the consumer's time (let alone his money), it might be necessary for the consumer to keep himself awake twenty-four hours a day to enjoy all these new boons of science. After all a man can only eat so much, wear so much, and spend so much time looking at television, listening to the radio, or riding around in airplanes. There's a hint to the medical research scientists: Wake up learned doctors! How about a substitute for Morpheus? Or if you can't do that, how about concocting some synthetic consumers—preferably well heeled with cash?

—F. X. W.

ADDRESS by Charles F. Kettering before the New York State Bankers' Association, New York city, February 3, 1936.

TECHNOLOGY IS TOO SLOW. Editorial. *The Wall Street Journal*. February 4, 1936.

IS TECHNOLOGICAL UNEMPLOYMENT PREVENTABLE? By Scoville Hamlin. *Modern Finance*. February 1, 1936.

Scientific Invention and the Electrical Art

THE works and wonders of the late Thomas Alva Edison are so well known throughout the civilized world that further review of his genius at this late date is necessarily in the nature of a work of supererogation. The brilliance of Edison has also had the effect, perhaps, of obscuring or at least diverting the attention of the lay citizen from the accomplishments of those who picked up after Edison, so to speak, in the field of electrical science. Those complimentary geniuses who carried on the torch that lit the world on that fateful day at Menlo Park, N. J., October 21, 1879, have lately attracted more popular attention.

On March 20, 1886, there was observed the Golden Jubilee of the first public demonstration by William Stanley of his electrical transformer in Great Barrington, Mass. It is difficult to estimate the extent of the value of this discovery to the electrical art.

Skeptics may shrug their shoulders and say that the thing was inevitable and that if Stanley had not hit upon the principle of power transformation, somebody else would have gotten around to it sooner or later. However, even if this were so, what a comparatively backward place this world would be today if we had to sit around waiting fo the transformer until 1908, for example, when Colin Fink discovered the process for ductile tungsten which revolutionized the electric lamp industry. Indeed, Edison's great discovery might not have moved much further than Pearl street if Stanley's transformer had not appeared at the comparatively early date of 1886.

In brief, the transformer made the use of alternating current practicable. Direct current requires heavy wires for distances in excess of a few thousand feet. It is interesting now to look back into the technical literature of those important eighties and ponder the arguments of the "high pressure" school that wanted to use alternating current which, as we know today, can be transmitted great distances on comparatively thin wires. They pointed out that to light Fifth avenue in New York city with direct current from 14th to 59th street,

the conduits would have to be as thick as a man's leg.

BUT Edison, still skeptical of the feasibility of alternating current, was courageously preparing to light the whole city with a series of short range direct current stations from the Battery to the Bronx. Even as late as 1889 he wrote in *The North American Review:*

> There is no plea which will justify the use of high alternating currents either in a scientific or commercial sense . . . and my personal desire would be to prohibit entirely the use of alternating current.

Nevertheless, persistent hard-headed George Westinghouse kept plugging away with Stanley's newly invented transformer. With this magnetic device he knew that it was possible to "step up" alternating current to high voltages, shoot it miles away, and step it down again to the practical voltage of household or industrial use. In the end Westinghouse won the war of the currents. In due time, of course, Edison was converted. *The New York Times,* commenting on Stanley's great achievement, stated:

> Inventions are evolutions. They never spring Minerva-like from an exceptional brain—perfect and complete. Like others, Stanley built on the past. Before him there was Faraday, whose early experiments in induction were also experiments in transforming electricity. Gaulard and Gibbs devised promising transformers of limited utility which Westinghouse imported for the ingenious Stanley to study. The Hungarians, Zipernowski, Deri, and Blathy, had hit on the correct principle before the Great Barrington demonstration. No doubt the electrical engineers who honor Stanley today will do justice to these pioneers as well as to Stanley's colleagues, Shallenberger and Shmid, and to his mentor and employer, George Westinghouse, whose imagination and resistless will made this an alternating current America.

To place Stanley in this historical light is not to belittle him, contends the *Times*. He had the synthesizing mind that always marks great invention.

THE reference to Colin Garfield Fink and his perfection of the ductile tungsten filament recalls another inventive hero of the electric industry, who carried on the work of the immortal Edison. Freshly graduated from Columbia University and post-graduated from the University of Leipzig, Fink, who still labors in the vineyard of science, got a job in 1907 with the General Electric Company at $75 a month. Just for practice, so to speak, he was put to work on what was then the biggest problem of the industry—the search for ductile tungsten. The single looped carbon filament perfected by Edison in that epoch-marking first bulb at Menlo Park, N. J., burned much current, gave off comparatively little light (a yellowish hue) and was about as fragile as an orchid. Platinum had already been tried with satisfaction but the expense made its general use impossible. German engineers had found that if tungsten is ground to powder, mixed into a paste with sugar and water, and then squeezed through a little hole, it became, after baking, a thin metallic thread capable of lighting up with great brilliance when current was applied.

Unfortunately it was much more fragile than even Edison's carbonized linen thread filaments. Lamps made with the German tungsten had to be sold with the warning: "Not to be dusted unless burning." Even touching them or jumping on the floor below would sever the brittle filament.

HERE is a recent description of Fink's discovery as written by G. Edward Pendray in the weekly magazine *Today:*

> In laboratories ductile tungsten had almost become one with perpetual motion—something that just couldn't exist. So when young Colin Fink actually became interested in this impossible problem, he properly earned the reputation of being a little queer. Another thing—instead of hot furnaces, high pressures, unusual reagents, and the like, Fink used only a little apparatus he built (he has it yet) to measure the relative brittleness of various samples of tungsten. He prepared specimens in various ways and tested them to see which was nearest to his desire.
>
> Like the Germans, he ground tungsten to powder, and studied the little grains under a microscope. The remarkable fact is that

the tiny individual grains of tungsten are malleable—can be hammered and worked. It is only when a mass of them is fused together that the resulting piece is brittle. Then Fink discovered that when tungsten powder is heated a little—to red heat—the ductility spreads to the whole mass. It then remained only to make a machine that would squeeze a charge of hot grains through a tiny hole, extruding a little wire of tungsten—*ductile* tungsten.

When the first hairlike wires came from his extruder, Fink didn't run to his superiors with the discovery. The fact is, he couldn't quite believe it himself. He waited two weeks, making plenty of the little wires, testing them for brittleness, for resistance to current, for the light they gave off when a stated amount of electricity was used. He made the discovery on August 15, 1908. On the first of September he was still testing it, preceiving how his one vital contribution brought together all the things others had learned about tungsten, like the key piece in a picture puzzle.

When Willis R. Whitney, then head of General Electric laboratories, finally picked up Fink's wire specimens and twisted them he could scarcely believe it was tungsten. "Are you sure they aren't nickel?" he asked.

Subsequently, about 1911, Fink also distinguished himself at the General Electric laboratory by developing copper-coated nickel alloy which cut down the cost of materials used for sealing electric light bulbs from $7,000,000 to $126 in a single year—the larger figure being for platinum which previously had been used.

—M. M.

AN ELECTRICAL ANNIVERSARY. Editorial. *The New York Times.* March 20, 1936.

MAGICIAN OF METALS. By G. Edward Pendray. *Today.* May 2, 1936.

Extent of Commission Jurisdiction over Electric Utility Service

THE Federal Power Commission recently made public its report on "State Commission Jurisdiction and Regulation of Electric Rates and Service," designated as Rate Series No. 6. Giving detailed data of the state regulatory bodies, as of October, 1935, as they affect both publicly and privately owned electric utilities, this report covers the extent and scope of state commission jurisdiction and regulation of electric rates and services.

A succinct picture of each state commission's authority is shown in one table, and the most important features are graphically presented in two maps. The authority of the commissions over privately owned utilities is shown as it affects rates, special contracts, service extensions to rural areas, and other factors. As regards publicly owned utilities, there are columns showing whether the authority of the commissions includes the power to regulate rates both within and beyond corporate limits as well as other phases.

Although in most cases the state commissions have categorical authority and powers, there were found to be instances where the jurisdiction or lack of it required a brief discussion. All of these cases are treated in the text of the report.

The report, prepared by the commission's electric rate survey, states that, "as an essential part of a national survey of electric rates, it is important to know the extent to which the public service commissions of the various states exercise authority over rates." To obtain information as a basis for the report a questionnaire was sent to each state commission. Their coöperation was readily obtained, and after their replies were tabulated a tentative draft of the report was submitted to the commission for verification. The commission's report is, therefore, an accurate and current national picture of state regulation of electric utilities.

THE report shows that all the states except Delaware—47 states and the District of Columbia—now have regula-

AWFUL POSSIBILITIES OF THE NEW SPEAKING PHONOGRAPH

tory bodies with jurisdiction over some class of utilities. Five—Florida, Minnesota, Mississippi, South Dakota, and Texas—have no jurisdiction over electric utilities, though the Minnesota commission does have the power to regulate construction of electric lines which may interfere with lines of communication. Iowa has some jurisdiction over electric transmission lines outside of municipalities but has no authority to regulate rates.

Thirty-eight of the 41 state regulatory bodies having jurisdiction over electric utilities report that they have the authority to regulate rates charged by privately owned utilities. Some are limited to regulation of maximum rates; others to rates outside of home-rule cities.

Twelve state commissions (Indiana, Kentucky, Maine, Maryland, Montana, Nevada, New York, Rhode Island, Vermont, West Virginia, Wisconsin, and Wyoming) reported that they have jurisdiction over rates charged by municipally owned utilities both within and without the corporate limits of the municipality. Nine (Arkansas, Colorado, Georgia, Louisiana, Nebraska, New Hampshire, New Jersey, Oklahoma, and Utah) advised that they have such jurisdiction only outside of the city limits. Others outlined the extent of their jurisdiction.

Recent legislation in Indiana, Oregon, and South Carolina exempts municipally owned utilities from commission regulation. To this list might be added Kentucky which acted subsequent to the commission's study.

Rural electric service, regulation of customers' deposits, submetering, and power to permit adoption of sliding-scale plans are among the various phases discussed.

—F. X. W.

State Commission Jurisdiction and Regulation of Electric Rates and Service. Federal Power Commission Electric Rate Survey. Rate Series No. 6. Superintendent of Documents, U. S. Government Printing Office. Washington, D. C. Price 10 cents.

Checking on Municipal Ownership of Utilities

This year of 1936 witnessed the third issue of the Municipal Year Book, published by the International City Managers' Association, under the joint editorship of Clarence E. Ridley and Orin F. Nolting. The current issue, larger than its predecessor, contains a wealth of important data on municipal administration in the United States.

Of particular interest to utility circles is the study of reports from 930 American cities (having 10,000 population or over) on the subject of municipal ownership and operation of utilities. In brief, this study shows 70 per cent reporting as owning their own waterworks, 28 per cent airports, 14 per cent electric light plans, and 12 per cent markets. Five more cities in this group reported operating electric plants and distribution systems than reported on this subject for 1935.

Of the 930 cities reporting, 187, or 20 per cent, own no utility services, and 152 of these are below the 30,000 class. Only one large city (Philadelphia) reported municipal gas plant ownership. Three large cities operate transportation systems (Detroit, New York, and San Francisco). Five cities in excess of 200,000 population operate electric plants—Detroit (limited), Cleveland, Los Angeles, Columbus, and Seattle. See table of the summary on page 783.

Another interesting volume on municipal government is "Recent Federal-City Relations" by Paul V. Betters of the United States Conference of Mayors. Mr. Betters is obviously sen-

sitive about charges that recent Federal spending activities, probably through the Public Works Administration, have, by short circuiting the state governments, had a tendency to weaken state government and make local government subservient to Federal bureaucracy. Mr. Betters pooh-poohs the suggestion that this betokens danger of Federal dictatorship. On the other hand, he claims that the new lines of direct communication between the cities and the Federal government are simply the development of a new channel of coöperation that is necessary and wholesome.

Discussing relief and public works appropriations, municipal debt readjustment, the NRA, the HOLC, and social security act, Mr. Betters finds that while such legislation directly concerned the local communities, in no case was the independence of a local unit subjected to national domination. The author believes, however, that in increasing Federal-city contacts, care should be taken to see that coöperation does not grow into control.

—E. S. B.

The Municipal Year Book, 1936. Edited by Clarence E. Ridley and Orin F. Nolting. International City Managers' Association, 850 East 58th Street, Chicago, Ill. 1936. 475 pp. $4.00.

Recent Federal-City Relations. By Paul V. Betters. Washington, United States Conference of Mayors, 1936. 145 pp. $2.50.

Ownership and Operation of Utilities As Reported by 930 American Cities

Type of Utilities	All cities over 10,000	Over 500,000	200,000 to 500,000	100,000 to 200,000	30,000 to 100,000	10,000 to 30,000
Abattoir	36	1	0	3	14	18
Airport	261	12	22	27	59	141
Electric Distrib.	13	1	0	0	3	9
Electric Light	131	3	2	5	26	95
Gas	30	1	3	3	3	20
Gas Distrib.	4	0	0	0	1	3
Market	108	7	14	12	36	39
Port	60	5	10	13	15	17
Street Railway	14	3	3	2	2	4
Water Works	658	12	25	42	153	426
No Utilities	187	0	0	4	31	152
Not Reporting	30	0	0	2	9	19

Notes on Recent Publications

Dealing with Dealers. By Clifford Johnstone. *American Gas Association Monthly.* April, 1936.

Eighteenth Annual Report of Illinois Commerce Commission. July 1, 1934 to June 30, 1935. 147 pages.

Fort Peck: American Siberia. By James Rorty. *The Nation.* September 11, 1935.

An unfavorable report on working conditions under the Army supervision at the construction site of the Fort Peck dam.

Rulers of America. By Anna Rochester. International Publishers, 381 Fourth Avenue, New York. Price $3.50. 1936. 367 pages.

Replete with references and containing a good index, this is a readable work by a Communist authoress who tries very hard to develop the fact that America is ruled by a half-dozen master minds. Anna Rochester deals with the major financial groups in America, the Morgans, Rockefellers, and Mellons. Using the Marxist approach, she describes the "confusion" resulting from rivalry and coöperation between these groups. She concludes that the House of Morgan alone dominates more than one sixth of the corporate wealth of America. Although impressive in scope, the book apparently leans very heavily on original investigations made several years ago by Berle and Means in their more temperate volume, "The Modern Corporation and Private Property."

The March of Events

Denies Appointment

SENATOR Norris (R.) of Nebraska on May 8th said he had discussed TVA problems with President Roosevelt, but replied negatively when asked if he was to be appointed to the board of that organization following the expiration of the term of David E. Lilienthal.

SEC Amends Rule

THE Securities and Exchange Commission last month amended its rule under the Utility Act defining gas utility companies. While the new rule, like the old, provides that companies selling not more than $100,000 gas at retail per year and primarily engaged in some other business are not gas utility companies, it goes further and makes clear that sales to industrial consumers for their own use are not deemed sales at retail for purposes of the act.

The commission explained that the mere fact that a company has a subsidiary pipeline company selling to industrial consumers is not alone sufficient to make the parent company subject to regulation as a public utility holding company.

Protest Lobby Inquiry

PETITIONS signed by 55,000 citizens protesting against the methods pursued by the Senate lobby committee and the Federal Trade Commission with respect to seizure of private telegrams were sent on May 10th to Vice President Garner by the American Liberty League for spreading on the Senate's record. The protests bear signatures from every state, including 13,600 from New York.

The petition protested against the high-handed actions of the Senate lobby investigating committee and of the Federal Communications Commission in the wholesale seizure, without authority, of private telegrams of individuals and organizations. The petitions were said to represent a preliminary filing only.

Phone Rates "Too High"

ON May 7th Paul A. Walker, chairman of the telephone division of the Federal Communications Commission, advised Congress that long-distance telephone rates are "very much too high." Publication of his testimony at recent hearings before a house appropriations subcommittee also disclosed that he urged elimination of extra charges for hand telephone sets. Commissioner Walker termed as "wholly unjustified" a license contract arrangement under which he said the American Telephone and Telegraph Company received $14,000,000 in fees annually from operating companies. He said long-distance rates had been shown to be too high on the basis of A. T. & T. returns from this service.

Reports Rate Trend

A TENDENCY toward simplification of electric rate structures for utilities was noted in a report made public last month by the Federal Power Commission.

The report disclosed that nearly 5,800 communities with approximately 22,500,000 population are served by utilities having uniform rates in not less than 75 per cent of the communities they serve. In more than 17,000 communities with a total population of 18,500,000, however, a majority were said to be served by utilities using a large number of varied rate schedules.

The survey showed that the southern states have been most active in establishing uniform rate schedules. Only 38 utilities, operating in 22 states, have established complete uniformity, according to the report.

Federal Power Commission Report

A REPORT made public last month by the Federal Power Commission disclosed that an increase of almost 25 times in capacity and operations of electric utilities has taken place during the last thirty to thirty-five years, and that from 1902 to 1932 value of plant and equipment rose from $504,740,352 to $12,664,376,952; income from $84,186,605 to $1,975,303,955; expenses from $68,081,375 to $1,566,356,044; generating capacity from 1,212,235 kilowatt hours to 34,622,554 kilowatt hours; output from 2,507,051,000 to 79,657,467,000 kilowatt hours, and number of employees from 30,326 to 244,573.

The report was compiled by the commission's national power survey on the principal electric utility systems in the United States. It covered 57 principal and 50 minor systems having 90 per cent of the installed electric capacity of the United States; supplying 92 per cent of the electric energy available for such systems, and serving 89 per cent of the customers and receiving 92 per cent of the

revenue from ultimate customers. The report stated that these percentages were based on summaries from reports filed with the commission by 3,260 utilities, of which 1,507 were privately owned operating companies and 1,753 municipal electric systems.

OK's TVA Budget

A TOTAL of $39,900,000 would be made available to the Tennessee Valley Authority under the first deficiency bill passed by the House of Representatives and sent to the Senate. The ultimate cost of the TVA program was estimated as $499,150,000. Two years ago it was $310,000,000. The new figure was drawn by persistent questioning of TVA Chairman Morgan by members of the House appropriations committee at hearings on the deficiency bill.

The TVA request for $43,000,000 for the 1937 fiscal year was cut to $39,900,000. This was said to include expenditures of $7,125,000 on the electricity program, with an offset of $1,500,000 as the estimated receipts from power operations; $10,716,716 for the Pickwick Landing dam and reservoir; $8,006,372 for Guntersville; $5,563,000 for McReynolds dam; and lesser sums for others.

The ultimate program estimated that dams, locks, and reservoirs would cost $343,700,000, while the estimated cost of power houses and facilities would be $135,450,000. The remaining $20,000,000 is for general contingencies.

Alabama

Announce Power Bond Sale

CITY officials of Sheffield and Tuscumbia announced on May 7th that $360,000 in bonds had been sold to finance construction of municipally owned electric distribution systems, to use TVA power. At the same time the cities announced contracts for construction of the two systems had been awarded to a New Orleans construction company.

Sheffield and Tuscumbia are two of the "tri-cities" of Muscle Shoals, nucleus of the government Tennessee valley development. Florence is the third city. All three have voted to use TVA power.

Takes over Lines

THE Tennessee Valley Authority on May 2nd announced purchase of transmission lines in northern Alabama, formerly owned by the Alabama Power Company, for about $1,150,000, with which to carry electricity of the Federal agency into the towns located in that section.

The lines which changed hands were involved in an injunction suit filed by the minority stockholders of the utility, which was carried to the U. S. Supreme Court. The deal, however, had nothing to do with ownership of the distribution systems in the towns including Florence, Sheffield, Tuscumbia, Decatur, Russellville, Red Bay, and Athens. James Lawrence Fly, general solicitor of the TVA, who closed the deal, said actually that current would be sold to the Alabama Power Company at wholesale rates "at the city gates."

According to press reports, it was stated that the utility would continue to hold the distribution systems, with its current to be supplied by the TVA over its own lines and from its own dams.

Arizona

Can Help Cut Tax Bill

STANLEY A. Jerman, city attorney of Wickenburg, last month declared that Arizona cities and towns can abolish municipal taxes by ownership and efficient operation of the public utilities serving them. Jerman was one of the speakers at the semiannual meeting of the Municipal League of Arizona, which convened in Phoenix recently for a 2-day session.

Mr. Jerman said operation of public utilities by municipalities offers a solution for their tax problem. He cited Wickenburg as proof of his contention. That town, an incorporated municipality, has two public utilities, water and electricity, which, he explained, are paying for the operation of its various departments and making money.

Subject of Probe

THE state corporation commission early last month ordered an investigation of the rates charged by the Tucson Gas and Electric Company for light, power, and gas. A rate engineering firm was employed to conduct the inquiry.

The action was taken by the commission under provisions of an act passed by the legislature authorizing it to conduct such an investigation.

Arkansas

Seeks Gas Rate Reduction

THE Jonesboro city council was scheduled to meet May 25th to hear the report of the natural gas rates investigating committee and to decide upon a course to pursue in its fight for reduced rates in that city, according to recent press reports.

It was said that a survey by the state utilities commission showed gas rates in Jonesboro to be the highest in Arkansas.

Seeks Three Dams

GROWING demand for power in Arkansas was cited before the Federal Power Commission recently as one reason why a petition for a permit to construct three hydroelectric dams on the White river should be approved.

H. C. Couch, president of the Arkansas Power and Light Company, told the commission that he anticipated that his company would need the 170,000 kilowatts' capacity of the dams within a few years, and indicated that his company would build the dam within two years if the permit were granted.

Reopens Phone Case

HEARING of a citation against the Boone County Telephone Company to show cause why it should not put into effect a rate reduction at Harrison, recommended two years ago by the old fact finding tribunal, was set early last month for June 10th. The tribunal did not have power to order the reduction, but merely found that a 10 per cent reduction was justified and recommended that the city council order it put into effect. The council took no action and the utilities commission, which succeeded the tribunal, reopened the case several months ago on petition of residents of Harrison.

Commission engineers and accountants have made a new investigation and the hearing was to be based on their findings.

California

Ask New Power Plans

THE special power committee of the San Francisco Board of Supervisors voted recently to ask the public utilities commission for two more municipal distribution plans to take the place of those Secretary of Interior Ickes rejected. The session of the committee was reported marked by heated exchanges between enthusiastic proponents of municipal distribution and Supervisor Colman, whose position was described as being for municipal ownership if he can be shown it would benefit the city.

The committee recommended, over Colman's objection, that the board pass an ordinance designed to bring about a court test of the board's right to authorize an issue of revenue bonds without a charter amendment or a vote of the people. Supervisor Havenner indicated he would also press for a charter amendment at the November election to make it possible for revenue bonds for municipal power distribution to be passed by a majority, instead of two thirds of the voters.

Approves Gas Rate Cut

A SLASH in natural gas rates estimated to save San Francisco consumers $942,000 a year was approved recently by the state railroad commission. The order of the commission followed a submission of the new low rates by the Pacific Gas and Electric Company. Under the approved schedule the average San Francisco householder who uses 2,000 cubic feet of gas per month will save more than $4 per year.

Savings for consumers of natural gas in northern and central California would total $2,510,000 annually, according to estimates of the Pacific Gas and Electric Company. Chief benefit of the reductions which were announced sometime ago will go to domestic and commercial consumers.

Colorado

Appoints Delegates

GOVERNOR Ed C. Johnson last month appointed Dr. Ben M. Cherrington, director of the Denver university foundation for the advancement of the social sciences, and Mrs. L. Allen Beck, a former member of the women's division of the NRA publicity bureau,

to be Colorado's delegates to the third world power conference in Washington, September 7th to 12th. The conference will discuss the social, economic, and technical problems involved in the widespread development and use of electric power. It is sponsored by the government, technical engineering societies, and private utility interests.

District of Columbia

Moves to Cut Gas Rates

THE first step toward another downward revision of gas rates in the District of Columbia was taken by the public utilities commission on May 7th when it issued a formal notice that it would hold a public hearing on the question. No date was fixed but it was expected to be some time in August. It is to be preceded by an engineering and accounting investigation in conformity with the provisions of the sliding-scale arrangement governing future rates of the Washington and Georgetown Gas Light companies.

The agreement, fought to adoption by William A. Roberts, people's counsel, and made effective a short time ago by the commission and the companies, reduced the then existing gas rates by approximately $850,000. Under the sliding-scale agreement the gas companies are entitled to earn 6.5 per cent on their valuation.

Reduces Hand-set Charge

THE District public utilities commission on May 5th ordered a change in the charges by the Chesapeake & Potomac Telephone Company for use of the hand-set, or "French" type equipment, to prevent subscribers from having to pay more than $2.70 for use of the apparatus owing to temporary cessation of service.

Hereafter when a subscriber of the company has paid either $2.50 cash, or $2.70 in instalments, as an extra charge for the hand set, he will have what might be called a "life membership" and not have to pay at a later time any additional charge, even though service may be discontinued for a period. Credit will also be given subscribers, effective as of last July 1st, for what extra charges they have paid for the equipment, even though their service has been discontinued for a period less than one year.

Florida

Orders Transit Survey

BY unanimous vote, the Miami city commission on May 6th instructed City Manager L. L. Lee and Thomas E. Grady of the rate and traffic division, to look into costs and feasibility of the city taking over an interconnecting bus transportation system within the corporate limits. Electric trolley cars would be replaced by modern busses should the survey disclose feasibility of a city-operated transportation system.

The action was taken subsequent to reports that George B. Dunn, president of the Miami Transit Company, would ask the commission for a 30-year franchise to operate a transportation system in the city.

Announces Rate Reduction

A REDUCTION in electric rates which company officials said would reduce light bills in Miami by $400,000 a year was announced recently by the Florida Power & Light Company. The reduction was said to give Miami the same rates which have been in effect at other points served by the company since general reductions were begun in June, 1934.

City Solicitor Abe Aronovitz said the rate reduction sought by the city in its Federal court action would bring an approximate $800,000 reduction, but added that he saw no reason "why everyone shouldn't be happy over the $400,000 decrease, offered without prejudice to the suit pending in Federal court."

Georgia

Gets Allotment for "Coöps"

ALLOTMENT of $1,490,100 for 1,374 miles of rural electric distribution lines to serve nearly 6,300 farms in 10 areas previously without electric service was announced May 2nd by Rural Electrification Administrator Morris L. Cooke.

The North Georgia Electric Membership Corporation, a coöperative, may use up to

$87,400 for 92 miles of line in Catoosa county, Ga., using TVA power. The Toombs County Rural Electrification System Coöperative, of Lyons, Ga., received $53,000 to build 50 miles of lines in Toombs and Emanuel counties.

Illinois

Hearings Continued

HARRY R. BOOTH, attorney for the Illinois Commerce Commission, announced last month that hearings on the Commonwealth Edison Company rate case, which have been before the commission for more than eighteen months, probably would continue for another month.

The hearings which have been conducted almost daily since October 11, 1934, were on the citation of the commission for the company to show cause why its rates should not be reduced.

According to Mr. Booth, the case has cost the Edison Company more than $1,000,000. All expenses of rate cases are assessed against the company cited.

Resigns from Commission

BENJAMIN F. LINDHEIMER's resignation as chairman of the Illinois Commerce Commission was accepted by Governor Horner May 4th. It was rumored that Lindheimer would be succeeded in this post either by James M. Slattery, the governor's Cook county manager in the primary campaign, or by Irvin Rooks, attorney for the commission. Mr. Lindheimer mailed his resignation on February 11th, requesting that it become effective not later than May 1st, stating that it had become necessary for him to devote all his time to his real estate business. Governor Horner paid tribute to Lindheimer's service and confirmed the fact that private business had made necessary his retirement.

Kansas

Company Loses Plea

THE West Missouri Power Company, with offices in Kansas City, on May 4th lost in the U. S. Supreme Court its claim that an election at Washington, Kan., September 12, 1933, authorizing an $88,000 bond issue for a municipal power plant was illegal.

The court refused to interfere with a ruling on January 2nd by the tenth Federal circuit court of appeals which dismissed the utility company's plea for an injunction to prevent the city and officials from erecting the municipal plant. The Washington voters had approved the bond issue by 506 to 254.

The utility claimed the ordinance calling the election and the ballot used did not conform to Kansas law. It also protested that "false representations and propaganda" were used to influence the voters.

Kentucky

Gets Utility Tax Bill

THE state legislature last month sent to Governor Chandler a bill imposing a 3 per cent tax on gross receipts of all public utility companies—the tax to be paid by consumers. The governor's signature was assured.

Among the proposed legislation for consideration during the speccial session of the general assembly which was to convene May 18th was a recommendation that Kentucky municipalities be empowered to avail themselves of TVA power either directly or through nonprofit corporations.

It was suggested that the governor's reorganization commission draft the enabling legislation.

Louisiana

Faces Complaint

MAYOR Sam Caldwell, with the city attorney, J. H. Jackson, appeared before the Louisiana Public Service Commission last month, in session in Shreveport, and gave notice of intention to file without delay a formal complaint against the Arkansas Natural Gas

Corporation, distributors of natural gas in Shreveport, involving rates, practices, and regulations. Mayor Caldwell complained to the commission against a requirement by the gas company that property owners put up a deposit for gas meters, and also against what he believed were excessive rates charged in Shreveport. The commission advised the mayor that it would be glad to receive his complaint and that the case would be heard as soon as possible.

Plans Higher Taxes

GOVERNOR Richard W. Leche on May 7th said he would urge increased taxation on natural gas for the purpose of providing funds for his legislative social security program.

Governor Leche expressed distaste for any increase in taxation, but said that he felt there was no alternative if the social security program was to be carried out.

Massachusetts

Opposes Purchase Plan

OPPOSITION to legislation providing for public ownership of the Boston Elevated Railway was expressed by a majority of the members of the Metropolitan district council, which met May 4th in Mayor Mansfield's office.

A hearing on the proposed bill which would take over the elevated at a cost of $89.91 per share, amounting to slightly more than $21,000,000 was to be held before the committee on ways and means the following day, and at that time the opposition of seven greater Boston cities and towns to the legislation was to be announced.

Those who opposed the measure were Mayor Mansfield of Boston, Mayor John J. Irwin of Medford, City Solicitor Theodore A. Lynch of Cambridge, City Solicitor Morris T. Silverstein of Everett, Town Counsel Lincoln Bryant of Milton, City Solicitor Joesph W. Bartlett of Newton, and Town Counsel A. L. Taylor of Belmont.

Defends Holding Companies

APPEARING on May 4th before the state house ways and means committee in opposition to proposed legislation to regulate holding companies, Sheldon E. Wardell, counsel for the Massachusetts Electric and Gas Association, was emphatic that the holding company systems have resulted in "lowest operating costs."

Mr. Wardell declared that charges of "write ups and watering of stock" were made by persons who "entirely overlooked the value of the properties, the surplus money plowed into the properties, and in some cases the prices at which the operating companies were forced by the public utilities department to issue the stock."

Michigan

Expects Phone Rate Cut

A REDUCTION of about $1,500,000 a year in Michigan Bell Telephone Company revenues was expected within the next month or six weeks on order of the Michigan Public Utilities Commission, it was rumored at Lansing early in May. A rate cut of $1,500,000 a year would conform to none of the recommendations offered to the utilities commission in legal briefs but such a rate cut might be a compromise solution, it is said.

The attorney general's office recommended a $2,000,000 cut to be apportioned as the commission saw fit. Detroit attorneys urged a $2,500,000 decrease for Detroit and a $1,000,000 increase outstate. Outstate cities opposed the metropolitan suggestion and tacitly supported the attorney general's recommendation. Bell officials denied that a decrease in rates was possible and said an actual increase was justifiable.

Missouri

Seek River Development

THE Federal Power Commission was recently informed that residents in the Current river region of southern Missouri want the river developed for power, rather than for flood control. The testimony came from R. W. Street, president of the Current River Power Company, which sought a permit to construct three hydroelectric dams in Ripley, Carter, and Shannon counties of Missouri.

Street said organizations in the area en-

dorsed the idea for hydroelectric development of the stream so that its beauty could be increased and preserved. The company's application had been protested by the White and Black River Flood Control Association, but no witnesses appeared to voice the protests.

The commission took the application under advisement.

Montana

Demands Water Rights

The Montana water conservation and planning board on May 7th demanded before a senate committee that the state's water rights be protected in any legislation for power development in the Columbia river basin. A list of reservations which the state would demand as "protective measures" in the event that Congress considers a Federal power agency for the river area was given a special senate committee by L. A. Campbell of Helena, personal representative of Governor Holt.

Mr. Campbell said the board was opposed to creating any "authority" similar to the TVA, but would not object to establishment of the proposed Federal power agency if the state's interests were fully protected.

New York

Signs Natural Gas Contract

The Eastman Kodak Company last month signed a contract for construction of a pipe line from the Pennsylvania fields for the use of natural gas at its Kodak Park plant, located in Rochester, N. Y. The plan includes the laying of a 14-inch pipe line for nearly 100 miles, to be completed in the fall.

Herman Russell, president of the Rochester Gas and Electric Corporation, revealed that the company would oppose "any invasion" of the utility's territory. The company's franchise in Rochester does not give the utility exclusive rights of supplying gas in that city.

Restricts Municipalities

Governor Lehman on May 11th signed a bill which would restrict the borrowing power of municipalities throughout the state of New York. Designed to prevent the increase in local debt at the rate of recent years, the bill provides that bonds issued by other than Buffalo, Rochester, and New York city for three or more years shall not be contracted for a period longer than the estimated usefulness of the project.

The bill also restricts bonds issued for electric light and power projects to thirty years' duration.

Ohio

Asks Merger Approval

The Union Gas and Electric Company and the Cincinnati Gas and Electric Company have filed joint application with the Federal Power Commission for approval of the merger of the former company with the latter. Both companies are subsidiaries of the Columbia Gas and Electric Corporation.

The applicants claimed that approval of the merger would result in a simplification of corporate structure, and that economies of operation would result, inuring to the benefit of consumers.

Oregon

Gets National Approval

A Pacific northwest regional planning commission proposal to create a single, independent Federal agency to market Bonneville and Grand Coulee power has the backing of the national resources committee, according to recent press reports.

In a report filed with President Roosevelt the resources committee urged creation by the present Congress of a "new and separate Federal corporate agency" to administer Bonneville power. The proposed Federal corporate agency, the resources committee said, would "keep to the front the social and economic purposes underlying the government's power

development at Bonneville and Grand Coulee."

Unlike the TVA, the Columbia river agency would be restricted to a single major function, the marketing and distribution of power.

Pennsylvania

Fears Utilities' Fate

JOHN E. Zimmermann, president of the United Gas Improvement Company, at the annual meeting of stockholders held in Philadelphia last month, attacked the Securities and Exchange Commission and the attorney general's office in their handling of test cases on the constitutionality of the Holding Company Act, and the general administration as a whole.

He pointed to higher taxes, cited rate cuts, deplored "a mass of questionnaires from the Black investigating committee," outlined utility problems in general, and thanked stockholders for their support in the unsuccessful fight to block the Holding Company Act of 1935.

Mr. Zimmermann declared that, "If President Roosevelt is reëlected, I don't know what will become of us. When you have a President who creates a $6,000,000,000 deficit, I don't know where the country is headed for."

Recommends Excise Tax

GOVERNOR George H. Earle, in his opening message to the special session of the state legislature on May 4th, recommended an excise tax upon the sale of electrical energy, both retail and wholesale, within the commonwealth of Pennsylvania, to yield $5,000,000.

The tax as recommended would be levied in such a way that it could not be passed on to the consumer. At the same time, Governor Earle said, "it works no hardship upon the electric utilities, which now enjoy a virtual exemption from the real estate taxes all other corporations are obliged to pay."

Rhode Island

Pays No Light Bill

THE city of Pawtucket, it was learned last month, omitted for the fourth consecutive month to meet its monthly bill for street lights and parks. The May bill, submitted by the Blackstone Valley Gas & Electric Company, amounted to slightly more than $5,000. All told, the city now owes about $22,000 for electricity.

The policy of refusing to pay monthly bills for street lights and parks was announced in February by Commissioner of Public Works Albert J. Lamarre. Mr. Lamarre said that the policy would continue until the utility company gave the city a much greater reduction in electric rates than those already announced.

Kill Municipal Plant Acts

THE state senate by a vote of 22 to 19 recently killed the West Warwick utility act, which was comparatively innocuous, being subject to approval by a financial town meeting and confining the utility project to the geographical limits of the town.

The Pawtucket measure, a $5,000,000 municipal utility bill, which had passed the house was subsequently killed by the senate special legislation committee in the closing hours of the state legislature.

South Carolina

Loses Tax Case

THE Duke Power Company and its subsidiary, Southern Public Utilities Company of Anderson, S. C., lost their attack upon the 1932 South Carolina tax on electric power in the U. S. Supreme Court on May 4th. The court declined to review a ruling January 6th by the fourth circuit court of appeals which upheld the act, and denied the utilities claim for refunds.

The Duke lawyers contended the tax discriminated against their companies because it imposed a levy based on all power generated while certain other utilities paid a tax only on power sold. They contended this taxed them for power lost by transmission, estimated at about 20 per cent.

Tennessee

Files "Final" Offer

A PROPOSAL by the city of Memphis to purchase the existing electric distribution system of the Memphis Power and Light Company for TVA power, with the Federal Power Commission fixing the price after a survey, was submitted to the power company on May 7th. The offer was contained in a letter sent the power company by Thomas H. Allen, chairman of the city board of light and water commissioners, who said construction of a municipal plant would continue unless the power company accepted the offer. City officials said the offer was "final," and were making plans to go ahead with the construction of a new electric distributing system to be owned and operated by the city of Memphis.

Will Fight Power Case

THE city of Knoxville last month definitely decided to fight its latest municipal power case through Knox county chancery court on the basis of both a demurrer and answer to the Tennessee Public Service Company's new move. The power company has obtained a temporary restraining order from Chancellor A. E. Mitchell, preventing the city from proceeding with plans to build a municipal power distribution system with PWA or other funds, to resell TVA-generated electrical energy. A hearing was set for May 26th.

Virginia

Request Private Utility Service

CITIZENS of the Doswell area in Hanover county were prepared last month to renew their plea to the state corporation commission that they be given power service from the Virginia Electric and Power Company rather than from Farmers' Rural Utilities, Inc., a coöperative which is functioning on funds promised by the Federal Rural Electrification Administration. George E. Haw, counsel for the Hanover group, said that the petition was based upon the announcement of Morris L. Cooke, REA administrator, that the REA has stopped activities in Virginia.

The state commission had previously ruled that the Doswell territory should be allotted to the FRU rather than to the private utility.

Washington

Special Rate Quiz

THE state department of public service was to hear charges last month against the Puget Sound Power & Light Company which was said to be allowing special discounts on bills for electricity to apartment house operators and business houses in the city of Seattle.

Since the department has no jurisdiction over the city light plant, the hearing was to pertain only to the power company, but the Seattle city council notified the department it would take similar action against the municipal company.

Wisconsin

Group to Aid REA

A STATEWIDE rural electric coöperative to aid in the efficient construction and management of rural electric lines in Wisconsin under the Federal REA program was organized last month. Articles of organization were drafted and filed with the secretary of state.

The coöperative is to be called the Wisconsin Rural Electric Coöperative Association. It is a central engineering, management, and educational coöperative to which local rural electric coöperatives can look for aid and assistance in drafting plans and specifications, submitting projects to bid, and setting up systems of operation.

Provisions were made to elect one director from each coöperative represented in the association.

The fourteen directors selected will hold office until the first annual meeting in March, 1937. H. O. Melby, of Vernon County Electric Coöperative, was chosen president of the association.

The Latest Utility Rulings

Rate Reduction Order Held Void by State Court

THE fear on the part of some that state courts would be more hostile to public utilities than Federal courts is not fully supported by the reported decisions. In fact certain advantages to the utilities are available in state courts, as indicated in a recent decision in Oregon, where a commission order reducing telephone rates was overturned by the state circuit court. The court said in part:

> We are not sitting, as does the United States Supreme Court, to review only constitutional questions, but as a state court charged with the duty of determining whether the order of the commissioner is lawful under either the common or statutory law of this state or under the Federal Constitution.

The court discussed the matter of reversing a commission decision for error in method, stating:

> . . . the propriety of a method used is always open to review and criticism when the validity of the result is the subject of inquiry. And it appears that, though administrative orders will not be enjoined for mere error in method or reasoning, nevertheless if the entire process is pervaded by the employment of an improper method so that the result is controlled thereby, then the Supreme Court will condemn the commission's action as a violation of the due process clause from the procedural standpoint without inquiring into the question of substantive confiscation.

The court excluded as not used and useful vacant land "connected with telephone operations only by a present intent to use them if and when business expansion requires it," but included as property used and useful left-in disconnected telephones and disconnected inside wires, block, and drop wires. Concerning the latter it was said that, unlike the land, they had been actually used and did not represent excess acquisition or construction, but that they bore a strong resemblance in principle to the case of standby or reserve plant not actually in use at the moment of theoretical reproduction, but indispensable to a going concern and likely to be used at any time. The court adverted to the question of value attaching to such property because of the constant shifting of telephone subscribers, with a consequent lower cost of changes when instruments are left in place.

It was held that the company had failed to justify an increase in materials cost resulting from higher prices of the affiliated Western Electric Company and that it had failed to sustain the burden of proof as to the cost of payments made to the American Telephone and Telegraph Company under its license contract, but it was also ruled that the commissioner had exceeded his authority in attempting to eliminate expenses actually and in good faith incurred.

Accrued depreciation was determined by physical inspection in the field. The work, it was said, had been done by highly trained and competent men. The method was to ascertain per cent of service condition as compared to condition new. The appraisers considered nonphysical items such as inadequacy, requirements of public authorities, and obsolescence. Actual depreciation, it was said, should be calculated on the basis of loss of service value, and the amount of depreciation reserve is not even reliable evidence of actual depreciation.

No additional allowance was made for going concern value as the court had "given constant and conscious consideration to going concern value at every step of the process." The entire process by which the company arrived at reproduction cost was said to be impregnated with the idea that a successful going concern was being reproduced.

The commissioner was criticized for his method of separating exchange and toll property, revenues, and expenses, the court stating:

The point here is, that the commissioner has through the medium of a separate valuation of exchange property and separate determination of exchange rates *juggled* revenues and expenses as between the two branches of the telephone company's business, in such a way as to decrease the expense and increase the revenue of exchange, and increase the expense and decrease the revenue of toll; and at the same time he has permitted the toll rates to remain as they were, despite the fact that they were already inadequate even to pay the expenses of operation of the toll business.

Pacific Telephone & Telegraph Co. v. Thomas.

Reproduction Cost Must Be Considered in Finding Rate Base

An injunction was issued by a Federal district court in California to restrain the enforcement of a commission order reducing gas rates on the ground that there had been a denial of due process because the commission refused to consider any evidence of cost of reproduction in determining the utility's rate base.

The valuation used for a rate base had been obtained by the historical method. The court declared that in view of the rejection by the commission of all evidence concerning the cost to reproduce the property and in the absence of a specific finding as to the fair value of the property, the question was whether the decision of the commission could stand as against a charge that the company had been denied due process of law. The court, after reviewing the Supreme Court's rulings on this subject, held that rates fixed by the commission were illegal and void. *Pacific Gas & Electric Co. v. Railroad Commission of California, 13 F. Supp. 931.*

Valuation by Use of Price Indices Voids Rate Reduction Order

A state district court set aside the order of the Louisiana commission reducing rates throughout Louisiana by a total of some $600,000. Erroneous methods of valuation used by the commission were given by Judge W. Carruth Jones as the reason for the court's action.

It was said to be obvious that the valuation based upon the methods adopted by the commission shown in its findings of fact was violative of the principle of due process of law, and, in view of this conclusion, it was said to be unnecessary for the court to enter into a consideration of other errors assigned by the telephone company. Judge Jones said:

. . . the commission made no appraisal or inventory of the physical plant and property but approached the element of value otherwise. It found, preliminarily, that the company's cost of reproduction appraisal was slightly higher than the book cost represented by the fixed capital accounts, and excessive. The commission thereupon sought to establish present value by the use of tables and charts of price indices issued by the United States Department of Labor, Bureau of Statistics, United States Department of Agriculture, Bureau of Economics, Federal Reserve Bank, and Bradstreet's Rating Agency.

Price indices, the commission selected one covering 784 articles, reported by the United States Bureau of Labor Statistics, consisting of different classes of commodities, weighted for averaging, and from a composite index, "Wolff exhibit No. 5," showing various components, 12 in number, thus reduced the reproduction cost appraisal of the telephone company by 6 per cent. This was the precise method followed bv the Maryland commission and condemned by the Supreme Court of the United States in

the recent case of West *v.* Chesapeake & P. Teleph. Co. (1935) 295 U. S. 662, 8 P.U.R.(N.S.) 433.

The commission had also used as a measure of value book cost less the entire depreciation reserve. Judge Wolff said that this method of valuation had also been condemned in the West Case, decided by the Federal Supreme Court.

The commission asked a rehearing and argument was set down for May 18th. In the meantime the lower rates prescribed by the commission were to remain in effect. ***Southwestern Bell Telephone Co. v. Louisiana Public Service Commission.***

Rehearing on Change of Commission Personnel

A Federal district court denied injunctive relief against the Montana commission on complaint by a railroad company and a motor carrier based on the action of the commission in granting a rehearing and rescinding an order following a change in commission membership.

The court was not convinced that an intent upon the part of the state legislature to deny the board authority to grant a rehearing under the circumstances was sufficiently shown to justify a Federal court in anticipating a ruling by the state court to that effect.

The original commission orders permitted discontinuance of passenger train service on a branch line and granted an application for authority to operate busses and trucks. A certificate of convenience and necessity was not actually issued. At the time a petition for a rehearing was filed with the board and a copy served upon counsel the principal condition set forth in the board's order granting the application had not been fulfilled. This condition related to furnishing a bond before the certificate should be issued.

The commissioners contended that in a pending case the board could order a rehearing and a case was pending until a certificate was issued, and that consequently the board in the present case had the right to entertain the petition for rehearing and grant it before a certificate was issued. ***Northern Pacific Railway Co. et al. v. Board of Railroad Commissioners of Montana et al., 13 F. Supp. 529.***

Leased Transmission Line Excluded from Rate Base

The supreme court of Colorado sustained a lower court ruling that the commission had improperly included in the rate base of an electric utility a transmission line leased to another company. The line was used by the other company to furnish current to the electric utility and to other customers in the territory.

The court said that the test of whether the value of any given property shall be included in the rate base of a public utility is whether it is used and useful in supplying the commodity or service that the utility has undertaken to furnish. From this it was said to follow that property might be owned by a utility, but if it is not used by or useful to it in fulfilling its obligations to the public, then such property cannot be included in the base for rate-making purposes. Justice Young said in part:

> On the other hand, a utility may lease property, and, if it is used by it and useful in carrying out its obligations to the public, the rental paid for such property is a proper overhead charge to be borne by the utility customers, and to be equitably allocated to them. Such an expense will properly appear in the rate charged by the lessee utility, but the value of the leased property cannot be reflected in the rate base of the lessee utility, neither can it be reflected in the rate base of the lessor when such lessor surrenders the entire use of it for a consideration.

To include the transmission line, it was said, would be to allow consideration for a lease paid in advance to be reflected in the rate base as property used and useful in carrying out the obligations of the utility. If the contract of lease was improvident, it could not be remedied in a proceeding the parties to which included only one of the contracting parties. The record, it was said, clearly showed that the line was used entirely by and was useful to the other company in delivering energy to the electric utility at the city gate and in transmitting energy to its other customers beyond. For that right the other company had paid a legal consideration over and above any reduction in rates to the distributing company, the amount of which reduction, if such there was under the record, would be purely speculative. *Glenwood Light & Water Co. et al. v. Glenwood Springs, 55 P. (2d) 1339.*

Higher Rates in City Imposing Franchise Tax Are Not Discriminatory

THE supreme court of Illinois sustained a commission order authorizing a gas and electric company to add to its uniform charges for gas service in certain cities a percentage differential sufficient to meet annual payments required under franchise ordinances. In the city of Elmhurst, where complaint was made against this order on the ground of discrimination, an annual payment of 3 per cent of gross receipts was imposed.

The court declared that the discrimination forbidden by statute is as to rates between customers of the same class in the territory, but that customers residing in subdivisions of the same territory where an annual percentage of gross receipts is exacted from the public utility are not in the same class as those patrons who live in a municipality where such percentage is not exacted. Mr. Justice Herrick said in part:

> It is argued that annual franchise payments should not be charged against the patrons of the appellant, and that the practical effect is to give those who are nonusers of gas the benefit of the franchise rate paid by gas users. Such is the effect. It is seldom that the imposition of a tax or franchise charge does not work a hardship on some individuals. The human race has not yet reached that degree of perfection whereby taxing systems have been evolved which in their practical operation do not, on occasion, work some degree of injustice to some individuals.

Franchise payments, it was said, are properly chargeable as an element of the cost of operation which should be borne by the consumers of the utility's product or service, and the amortization of the franchise expenses should be charged as an operating expense. The opinion continued:

> It would be unjust to spread the burden of this annual franchise payment over the whole northern division. It should be borne by the company's consumers residing within the city as that city alone receives the advantage of such annual payment. So, also, it is immaterial in what form the *pro rata* share of the consumers' payment of the annual payment be made to the city. There is no statute in this state prescribing the method of allocating such item and it may properly be written on the consumer's statement as three per cent.

The court dismissed an objection that the charge was made only against residential and house-heating consumers since there was no proof made before the commission that there were any other classes of users in the city. This point, it was ruled, could not be raised for the first time in the appellate court. *City of Elmhurst v. The Western United Gas & Electric Co. et al.*

Submetering Company Denied Right to Collect for Electric Service to Tenants

A MUNICIPAL court in New York held that neither a submetering corporation nor a real estate corporation could legally engage in the public utility business by furnishing electricity, purchased at wholesale, to tenants of a building. Moreover, such a submetering company was held not to be the proper party in interest to sue a tenant of the real estate company for unpaid electric charges.

The lease, to which the submetering company was not a party, provided that the landlord might supply electric current and the tenant agreed to purchase from the landlord or any other company designated by the landlord all electric current required. Any amount as to which the tenant might at any time be in default was to be deemed "additional rent."

The court concluded that a business corporation not authorized to conduct a public utility business could not engage in such an enterprise. The fact that submetering had been carried on in New York for a long time did not, in the opinion of the court, validate the undertaking although it might lend an air of legality in the eye of the lay-public, for "in this field of the law adverse possession has not taken root."

Legal authority for a corporation to generate electricity for its own use and incidentally to distribute the surplus current or power for the use of tenants on private premises was held not to extend to these operations, for in the words of the court:

> In one instance, the disposal of the use of the surplus electricity is only an incident to a legitimate activity; besides being expressly excepted from the prohibition of the statutes. In the other, the *buying* and *selling* of electricity for profit (as contrasted with its distribution for *use*) is dealt in as a business—a business not strictly necessary nor in fact incidental to any of the expressly authorized activities of the corporation.

The court did not attach any real significance to the fact that the charges were made rent. Calling the charge for electricity rent, it was said, does not change the nature of the transaction, but such a provision only arms the landlord with an additional remedy for the collection of the utility charges, and the fact is the tenant buys electricity; he does not lease it. *Owners & Tenants Electric Co., Inc. v. Tractenberg, 286 N. Y. Supp. 570.*

Objectionable Franchise Provisions Bar Authorization for New Utility

THE city of Lebanon, Missouri, after successfully establishing in court its right to oust the existing telephone company after the franchise expiration, granted a franchise to promoters of a new company. The Missouri commission refused to authorize operation by the new company because of franchise conditions which, in the opinion of the commission, would render it wholly impossible for the new company to perform its duties as a public utility.

One condition was that the new system would be erected, operated, and maintained under the direction of the board of aldermen. Under the provisions of the Public Service Commission Act, said the commission, jurisdiction had been granted to it covering the erection, operation, and maintenance of telephone plants. The condition imposed by the city was therefore in derogation of the powers and duties conferred upon the commission and, if complied with, would render the commission wholly incapable of performing its duties. Although it was not in the province of the commission to determine whether the condition was valid, as such determination would be a judicial question, the